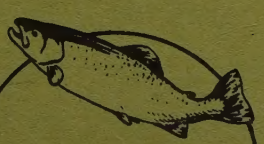
# Northeastern Pacific Albacore Survey
# Part 2. Oceanographic and Meteorological Observations



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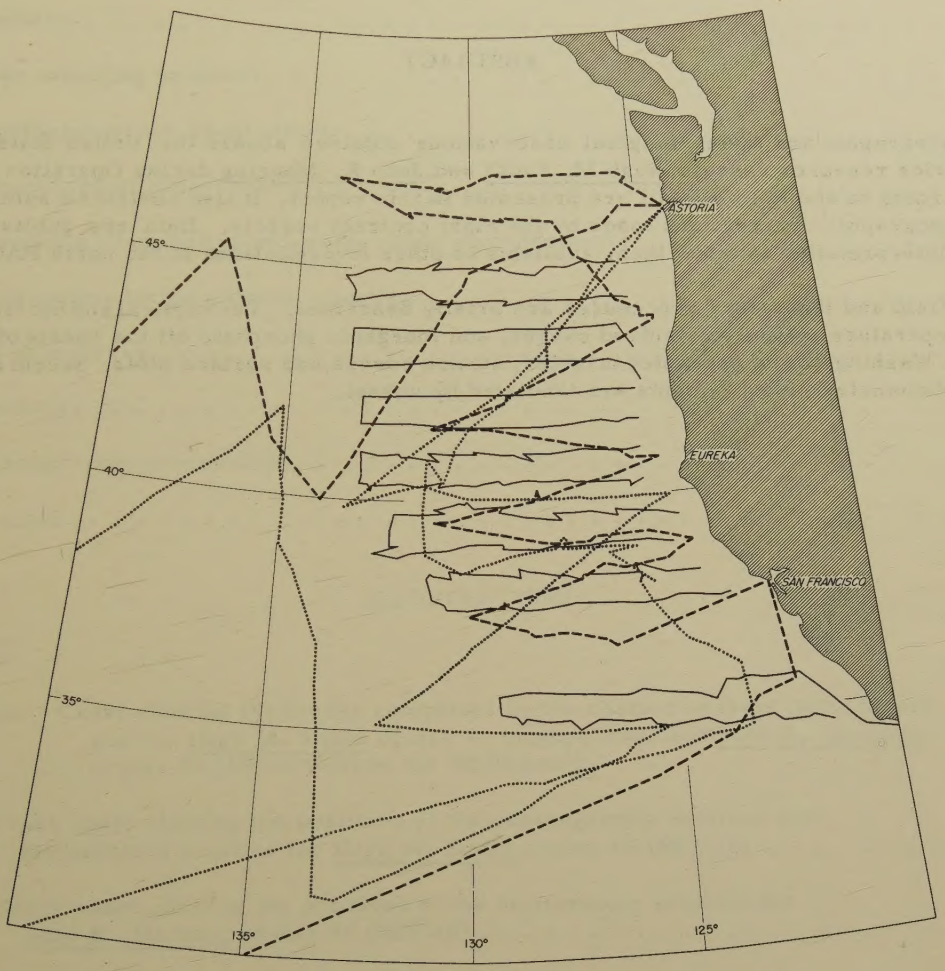


# NORTHEASTERN PACIFIC ALBACORE SURVEY

## PART 2. OCEANOGRAPHIC AND METEOROLOGICAL OBSERVATIONS

By

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## ABSTRACT

Oceanographic and meteorological observations obtained aboard the United States Fish and Wildlife Service research vessels Hugh M. Smith and John R. Manning during Operation NEPAS in 1957 and en route to and from Hawaii are presented in this report. It also contains a summary of the limited oceanographic observations made by the eight contract vessels. Data are published without analysis or interpretation to make them available to other investigations in the north PACIFIC area.

The field and laboratory procedures are briefly described. The vertical and horizontal distribution of temperature, salinity, dissolved oxygen, and inorganic phosphate off the coasts of California Oregon, and Washington are presented in tables, station curves, and surface plots. Secchi disc, Forel color, and photometer measurements are tabulated by vessel.

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The Northeastern Pacific Albacore Survey (NEPAS) was a survey of the abundance and distribution of the albacore, Germo alalunga (Bonnaterre), conducted in a band approximately 350 miles wide off the coasts of northern California, Oregon, and Washington between 35°N. and 47°N. latitude from July 22 to August 1, 1957. Meteorological and oceanographic observations, the data from which are presented in this report, accompanied the biological sampling program. It was conducted by the Honolulu Biological Laboratory, Bureau of Commercial Fisheries as part of their Saltonstall-Kennedy albacore project in cooperation with fishery research agencies of California, Oregon, and Washington. The Pacific Marine Fisheries Commission provided liaison among the cooperating agencies.

A total of 11 vessels participated in the survey. The Fish and Wildlife Service research vessel Hugh M. Smith acted as coordinating vessel and conducted most of the detailed oceanographic observations (see fig. 1). The Fish and Wildlife Service research vessel John R. Manning made a preliminary fishing survey of the NEPAS area and did additional fishing in the areas where the contract vessels reported their better catches. The Manning also made a limited number of oceanographic observations. Her track is shown in figure 2. Nine contract vessels started the trolling survey but only seven completed their assigned tracks (see fig. 3). The other two vessels were forced to withdraw before they had contributed materially to the survey. The tracks of the seven contract vessels completing the survey are shown in the frontispiece. The owners, the observers and the agency providing the observer are listed in table 1.

This report contains the oceanographic and meteorological observations taken aboard the Smith and Manning and the surface observations made by the contract vessels. The field and laboratory procedures are also described. The biological data collected during the survey, except for the plankton, have already been reported by Graham (1959). The plankton data will be contained in a later report.

## FIELD PROCEDURES

### Water Sampling Program

Seventy oceanographic stations were occupied by the Hugh M. Smith at the positions shown in figure 1 and listed in table 2. From Honolulu to 38°35'N., 142°28'W. and from 33°36'N., 126°30'W. to Honolulu, Nansen bottle casts were made at 0800 and 2000 zone time (total 30). Only one cast was made each day (total 40) in the survey area since the vessel usually hove to at night, in order to make a continuous trolling survey along her track. Trolling was conducted at 6.5 knots during the day.

At each oceanographic station a cast of 13 Nansen bottles was made to approximately 1200 meters. The spacing of the bottles in the upper 300 meters was determined by the characteristics of a bathythermograph trace obtained just prior to the station. The remaining bottles were placed at standard depths. Paired protected reversing thermometers were attached to each bottle. All but the upper four bottles (those at approximately 100 meters or less) carried an unprotected reversing thermometer.

Water samples were drawn from each Nansen bottle for salinity, oxygen, and inorganic phosphate determinations. At stations 99, 139, 147, and 156 additional samples were drawn for boron analysis. These samples were shipped to Mr. James Gast of the University of Washington for analysis.

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[1/] Presently employed at the Bureau of Commercial Fisheries Biological Laboratory, Seattle, Washington.

[2/] Formerly the Pacific Oceanic Fishery Investigations.

Surface samples for determination of salinity and inorganic phosphate were taken at most of the off-station BT casts. Surface salinity samples were taken by the Hugh M. Smith at approximately 30-mile intervals from Honolulu to the survey area, from the survey area to Honolulu, and surface salinity and inorganic phosphate samples were taken at each off-station BT cast in the survey area. Salinity and inorganic phosphate samples were taken by the John R. Manning at approximately 60-mile intervals from Honolulu to Astoria and at approximately 30-mile intervals from Astoria to 30°N. latitude (see fig. 2 for her track).

## Bathythermograph Observations

A 900-ft. BT cast was made from the Hugh M. Smith, before and after each Nansen bottle cast. When surface temperatures were 66°F. or less, BT casts were made at intervals of not more than 15 miles, when abrupt surface temperature changes were indicated on the recording thermograph, and each time albacore were landed if one hour had elapsed since the previous lowering. At surface temperatures greater than 66°F. two BT's were taken between oceanographic stations. The positions of and observations made at the Smith's BT casts are given in table 3.

From the John R. Manning, 900-ft. BT casts were made at approximately 30-mile intervals and also before and after each gill-net station. From Astoria, Oregon, to about 30°N. latitude, 450-ft. BT casts were also made at 0300 zone time on the nights when the gill nets were set. The positions of and the observations made at the Manning's BT casts are given in table 4.

The BT slides were processed by the United States Navy Hydrographic Office and the data were used to construct the temperature cross sections along the vessel tracks; Hugh M. Smith in figures 4 to 16 and John R. Manning in figures 17 to 27. The portion of the tracks included in each of the cross sections is indicated by the letters on the vessel tracks (figs. 1 and 2).

## Meteorological Observations

Synoptic weather observations as outlined in the United States Weather Bureau Circular M (1956) were made aboard both our vessels at 0000, 0600, 1200, and 1800 GCT and transmitted to the United States Weather Bureau at Honolulu or San Francisco, whenever radio conditions permitted. A summary of these observations as recorded on United States Weather Bureau Form 1210F are listed in tables 5 (Smith) and 6 (Manning).

## Subsurface Illumination and Water Color Measurements

Measurements of the percentage of subsurface illumination relative to that at the sea surface were made from the John R. Manning at 75 stations. Measurements were made not earlier than two hours after sunrise and not later than two hours before sunset. A Schueler photometer, which has been described by Callaway (1957), was used. The response curve of the photometer matched the standard curve of the International Commission on Illumination which has a spectral range of 430 to 700 millimicrons and a peak sensitivity at 550 millimicrons[3/]. The total incident light was estimated in foot candles with a standard camera exposure meter. Because the cable to the sea cell broke repeatedly, the 1-percent level of illumination was measured only occasionally. Some values at the 50-percent and 10-percent levels are also open to question because the shadow of the ship's hull and rigging interfered. The results are given in table 7.

Secchi disc and Forel water color observations were made from both the Manning and Smith. The Secchi disc observations were made in the manner described in the United States Navy Hydrographic Office Publication 607 (1955). Water color as it appeared according to Forel's scale against the Secchi disc background was also made at each lowering. Aboard the Smith these observations were made at 0800 zone time while operating outside the NEPAS area. Within the area they were made daily at 1300 zone time and after each albacore school had been worked when light and sea conditions were suitable. The Smith's results have been included in table 2. Aboard the Manning they were made simultaneously with the photometer measurements and have been included in table 7.

## Observations by the Charter Vessels

Each charter vessel was provided with bucket thermometer and a Secchi disc. They made surface temperature observations to the nearest half degree every four hours while underway and after each albacore school had been worked. The observed temperatures are not included in this report but have been used in constructing the surface temperature plot, figure 28.

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3/ Weston Photronic Photoelectric Cells, Weston Electrical Instrument Corporation Circular B-27-A, February 1949.

Secchi disc and cloud cover observations were made each day at local noon. The results are listed in table 8.

## LABORATORY PROCEDURES

### Chemistry

Salinity samples were placed in glass bottles and sealed with paraffin-impregnated corks and screw caps. Double titrations were made in the Honolulu laboratory using a modification of the Knudsen method. This modification (Van Landingham 1957) results in a stoichiometric end point and involves the use of an adsorption indicator, phenosafranin, in the presence of starch as a protective colloid. The surface salinities at the off-station BT's are given in tables 3 (Smith) and 4 (Manning) and those for the Smith's oceanographic stations in table 9. A plot of the surface salinity is shown in figure 29.

Dissolved oxygen analyses were performed aboard the Hugh M. Smith by the Winkler method. These results are also contained in table 9.

The inorganic phosphate samples were placed in screw-cap culture tubes, sealed with plastic tape, and quick, dry-frozen for analysis ashore. Analysis was performed in the Honolulu laboratory using a modification of Denige's method developed by Van Landingham[4/]. The values for the surface samples taken at the off-station BT's are included in tables 3 (Smith) and 4 (Manning) and the values for various depths at the Smith's oceanographic stations 19 through 139 are listed in table 9.

### Oceanographic Processing

Processing of the oceanographic data was performed at the Honolulu laboratory under the supervision of Mrs. M. L. Godfrey.

The presentation of the data is similar to that of King et al. (1957) in that only the observed station data are listed (table 9). In order to facilitate further use of the data, graphs showing the complete set of curves are also given for each station.

In the upper 300 meters one of the BT traces taken at the station was used as a guide in constructing the temperature depth curve for the reversing thermometer readings. To insure continuity among the various parameters, salinity and oxygen are shown as curves plotted against temperature rather than depth (Montgomery 1954). Station to station continuity was maintained by utilizing the curves for adjacent stations in constructing the curves for each parameter.

Although the inorganic phosphate data are included in the tabulations, they have been omitted from the station curves. This was because values in the vicinity of the oxygen minimum seemed to vary erratically. This will require further study and comparison with data from other sources to determine whether the variations are real or may have been caused by handling of the frozen samples.

Isopleths of thermosteric anomaly are shown on each station graph in lieu of the customary isopleths of sigma-t. This was done to permit the computation of dynamic heights by the method of Montgomery and Wooster (1954). This method differs from the conventional method (LaFond 1951) in that the pressure terms of the specific volume anomaly are neglected. The surface heights (geostrophic currents) relative to the 1,000 decibar level are shown in figure 30 to indicate the general circulation through the area.

[4/] Van Landingham, John W. MS. Stabilizing heteropoly color in the estimation of phosphate-phosphorus in oceanic waters. U. S. Fish and Wildlife Service, Bureau of Commercial Fisheries, Honolulu Biological Laboratory.

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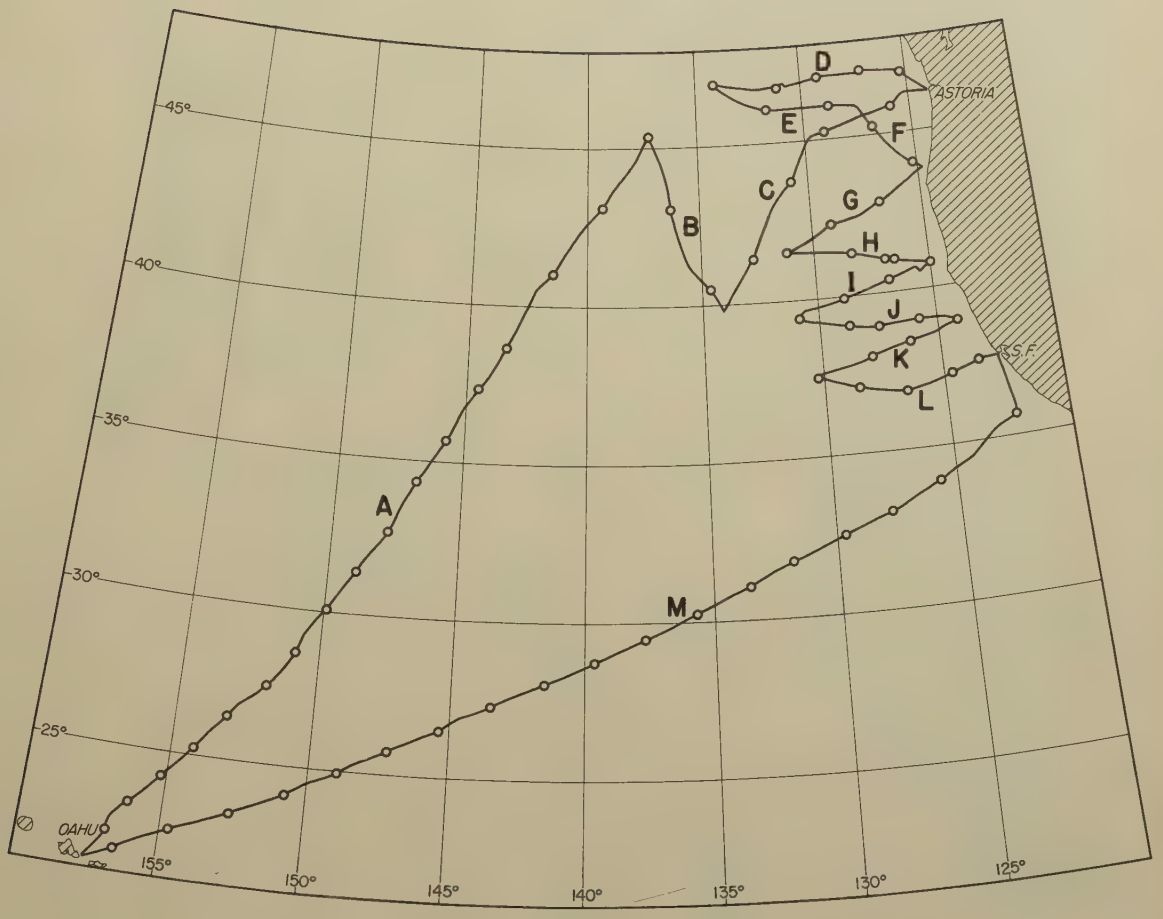



Figure 1.--Track chart, Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Circles indicate oceanographic station positions and letters designate the location of the temperature sections shown in figures 4-16.

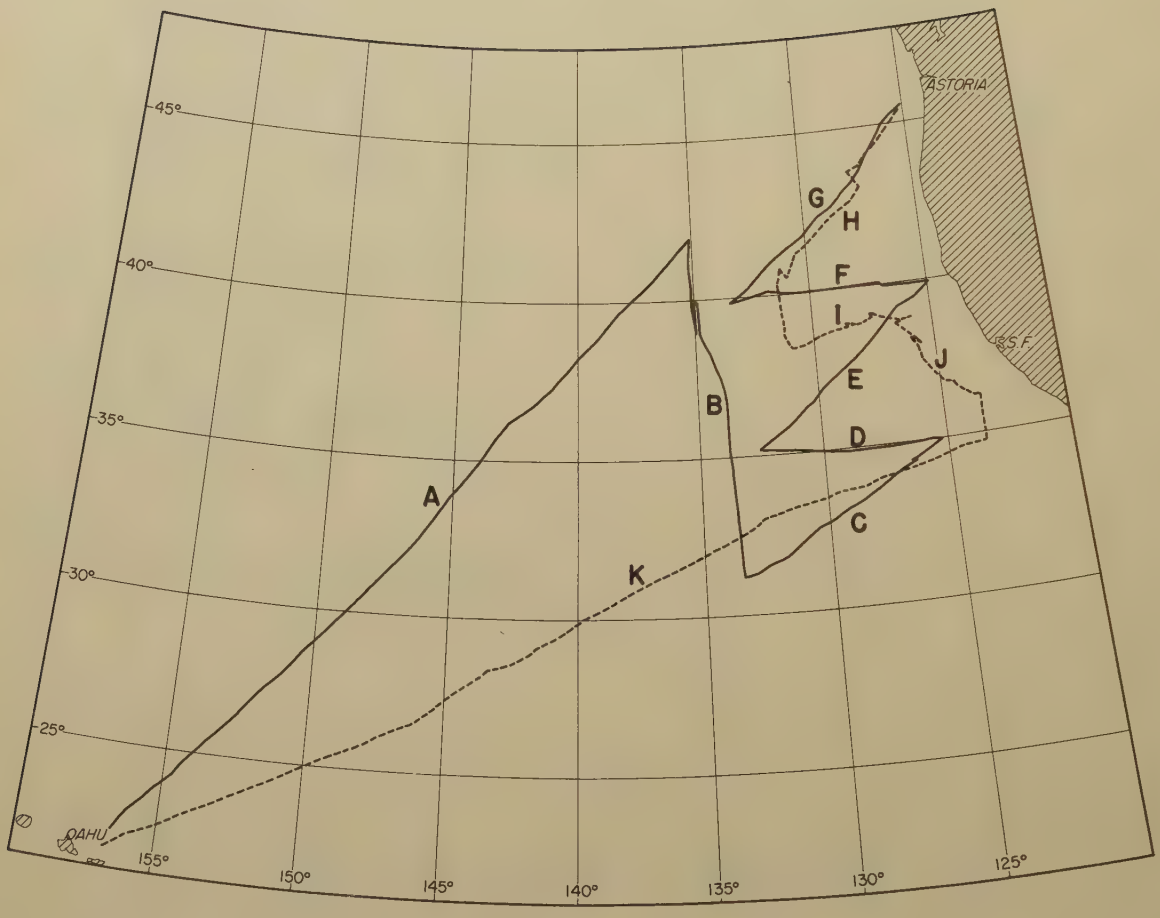



Figure 2.--Track chart, John R. Manning cruise 36 (NEPAS), June 11-August 20, 1957. Solid line - Honolulu to Astoria. Dashed line - Astoria to Honolulu. Letters designate the location of the temperature sections shown in figures 17-27.

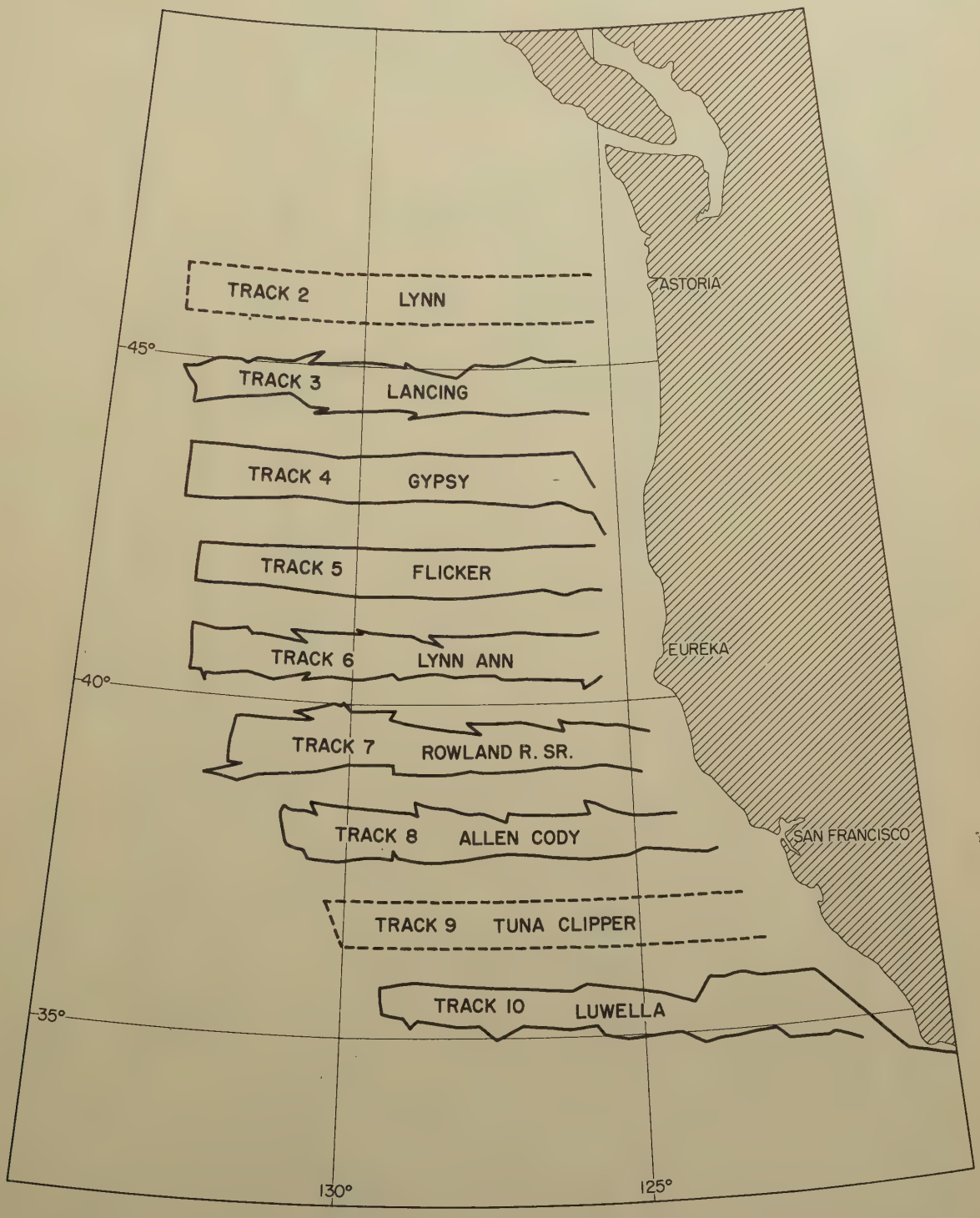



Figure 3.--Track chart, NEPAS charter vessels. July 22-August 1, 1957. Solid lines indicate actual tracks, broken lines indicate tracks assigned but not completed.

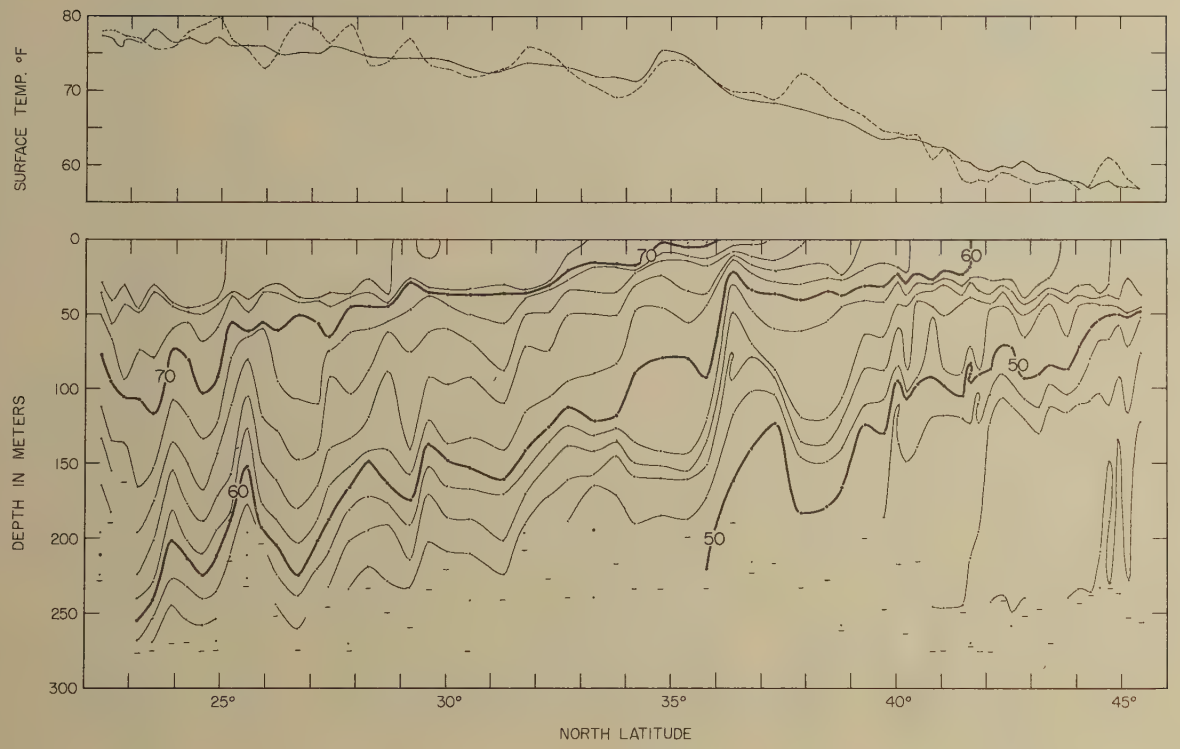



Figure 4.--Temperature sections from BT casts along Section A (see fig. 1), Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

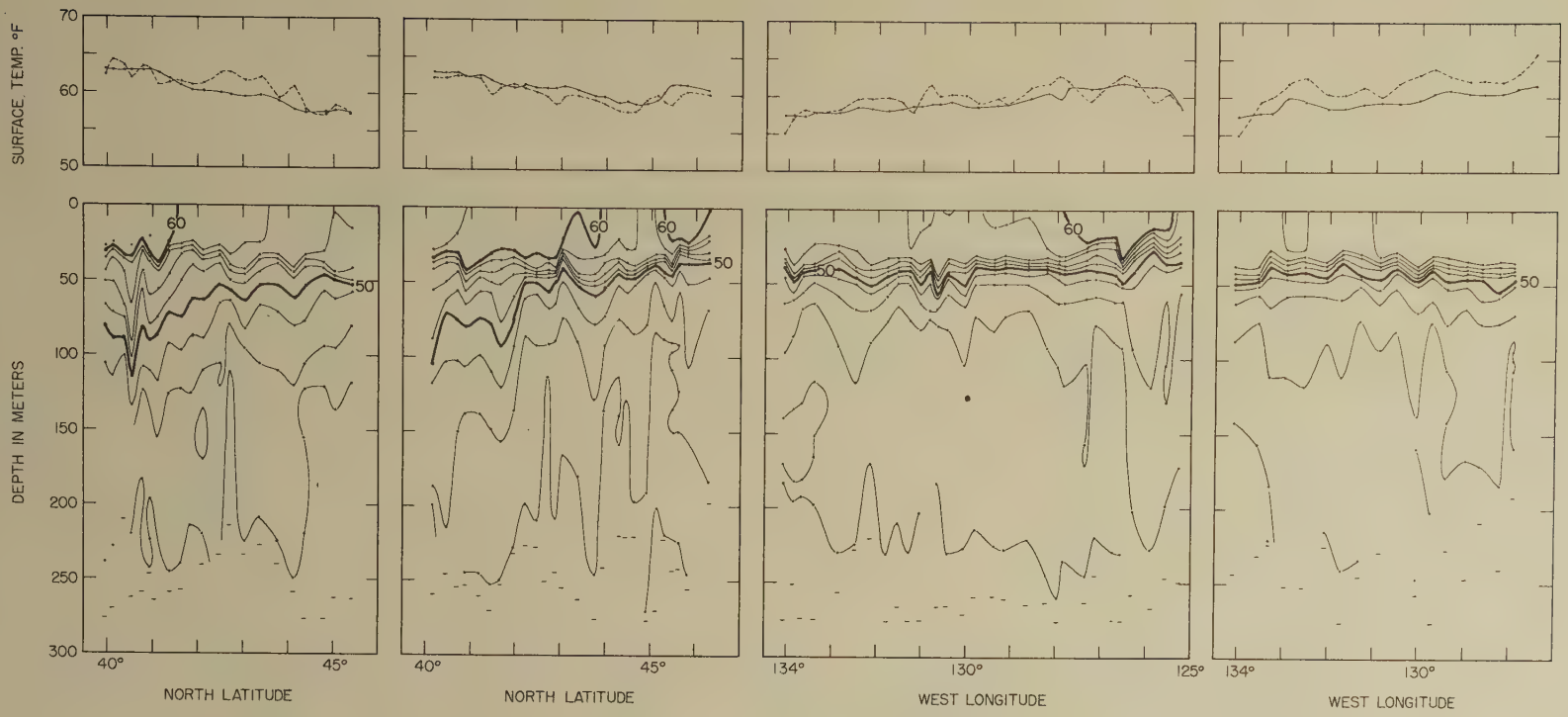



Figure 5.--Temperature sections from BT casts along Section B (see fig. 1), Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 6.--Same along Section C (fig. 1).

Figure 7.--Same along Section D (fig. 1).

Figure 8.--Same along Section E (fig. 1).

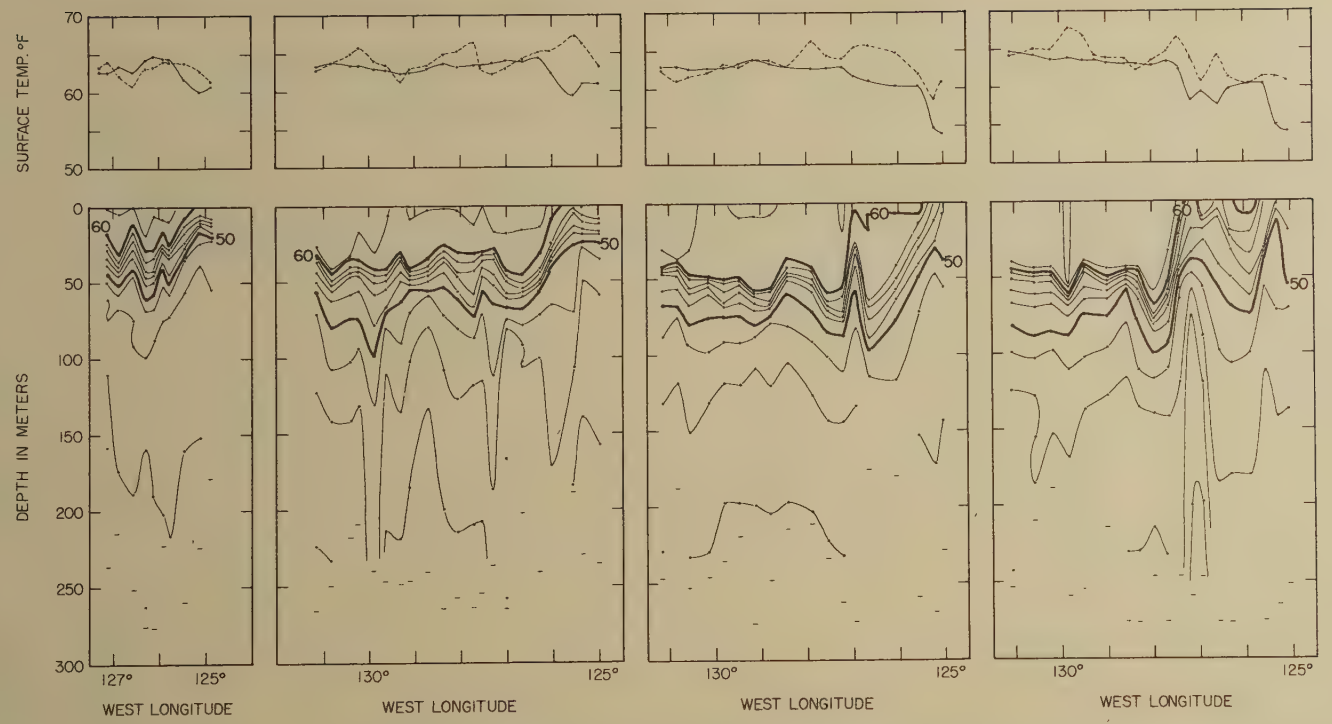



Figure 9.--Temperature sections from BT casts along Section F (see fig. 1), Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 10.--Same along Section G (fig. 1).

Figure 11.--Same along Section H (fig. 1).

Figure 12.--Same along Section I (fig. 1).

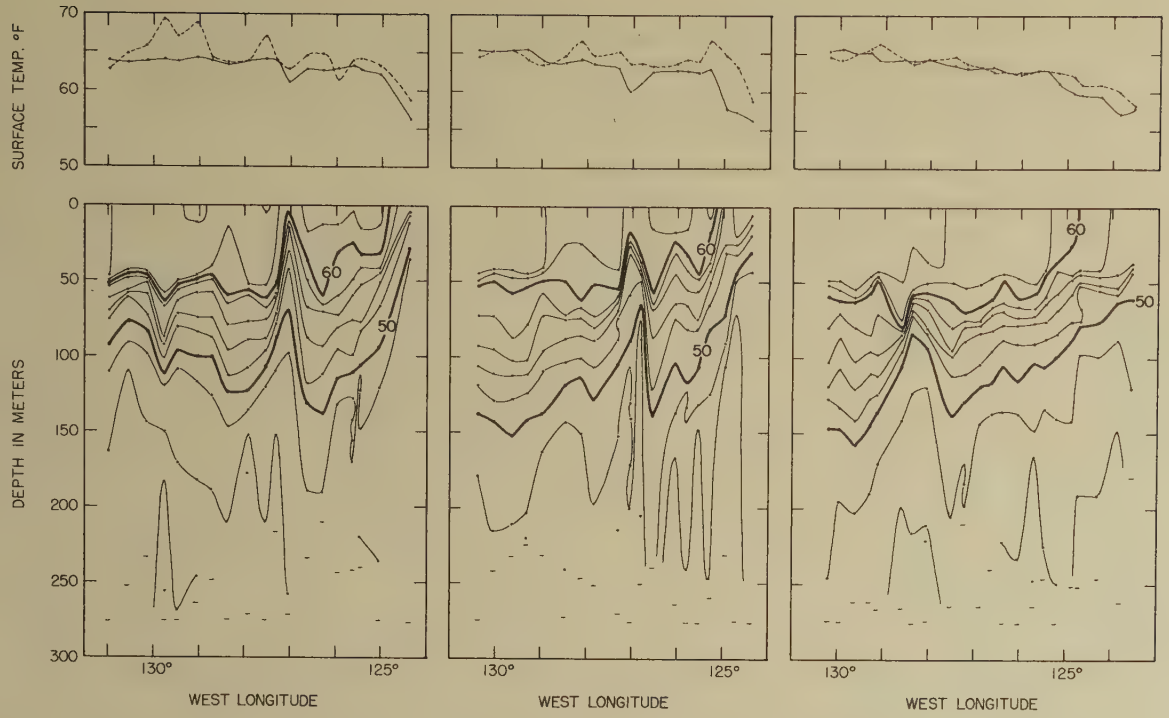



Figure 13.--Temperature sections from BT casts along Section J (see fig. 1), Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 14.--Same along Section K (fig. 1).

Figure 15.--Same along Section L (fig. 1).

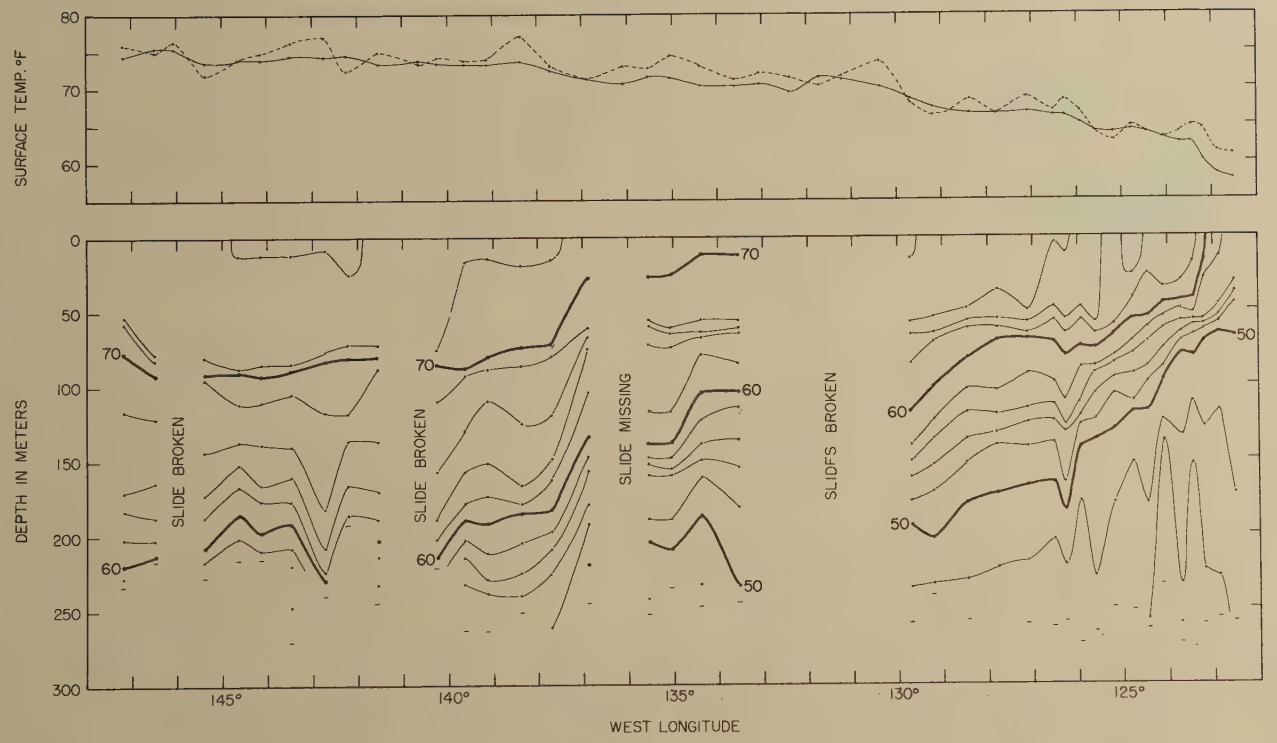



Figure 16.--Temperature sections from BT casts along Section M (see fig. 1), Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

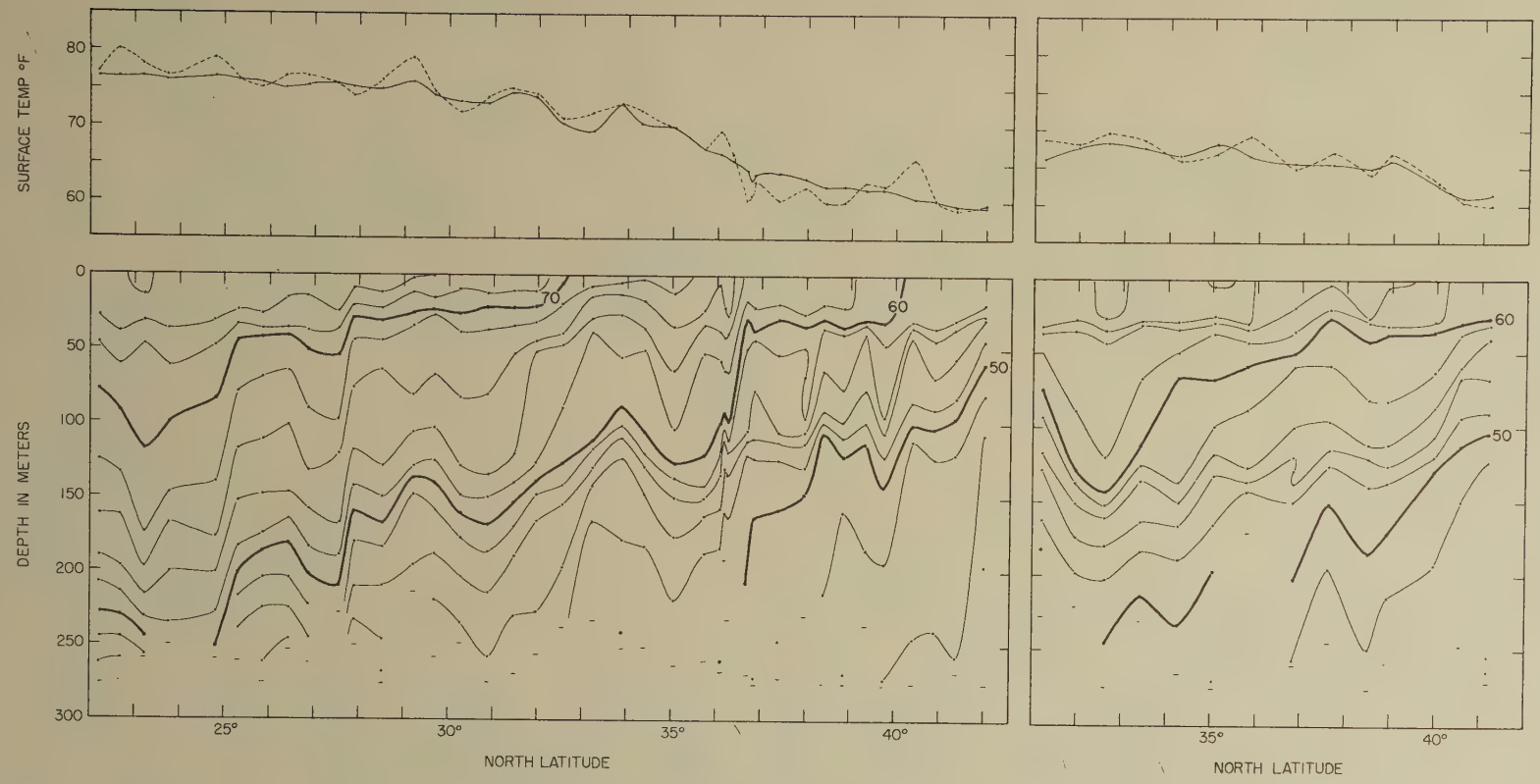



Figure 17.--Temperature sections from BT casts along Section A (see fig. 2), John R. Manning cruise 36 (NEPAS), June 11-August 20, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 18.--Same along Section B (fig. 2).

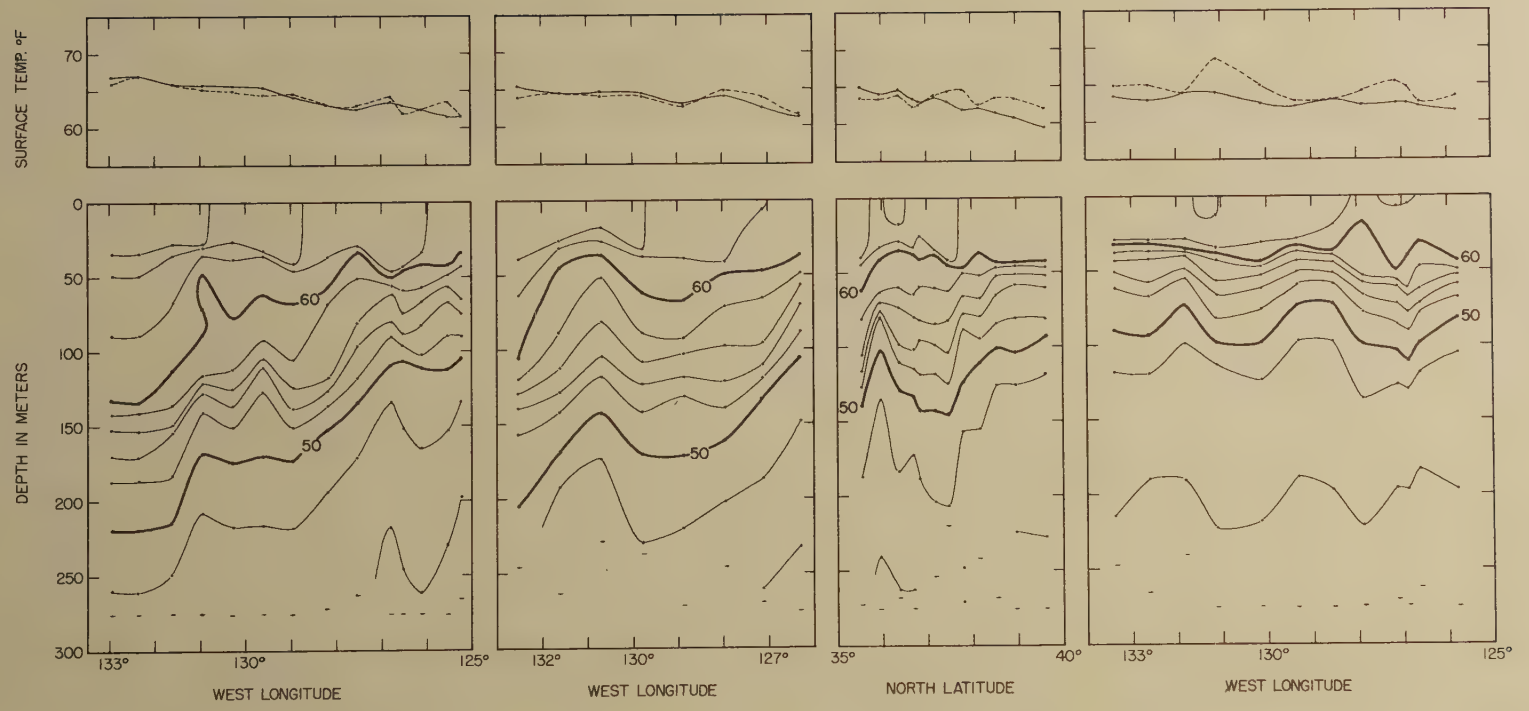



Figure 19.--Temperature sections from BT casts along Section C (see fig. 2), John R. Manning cruise 36 (NEPAS), June 11-August 20, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 20.--Same along Section D (fig. 2).

Figure 21.--Same along Section E (fig. 2).

Figure 22.--Same along Section F (fig. 2).

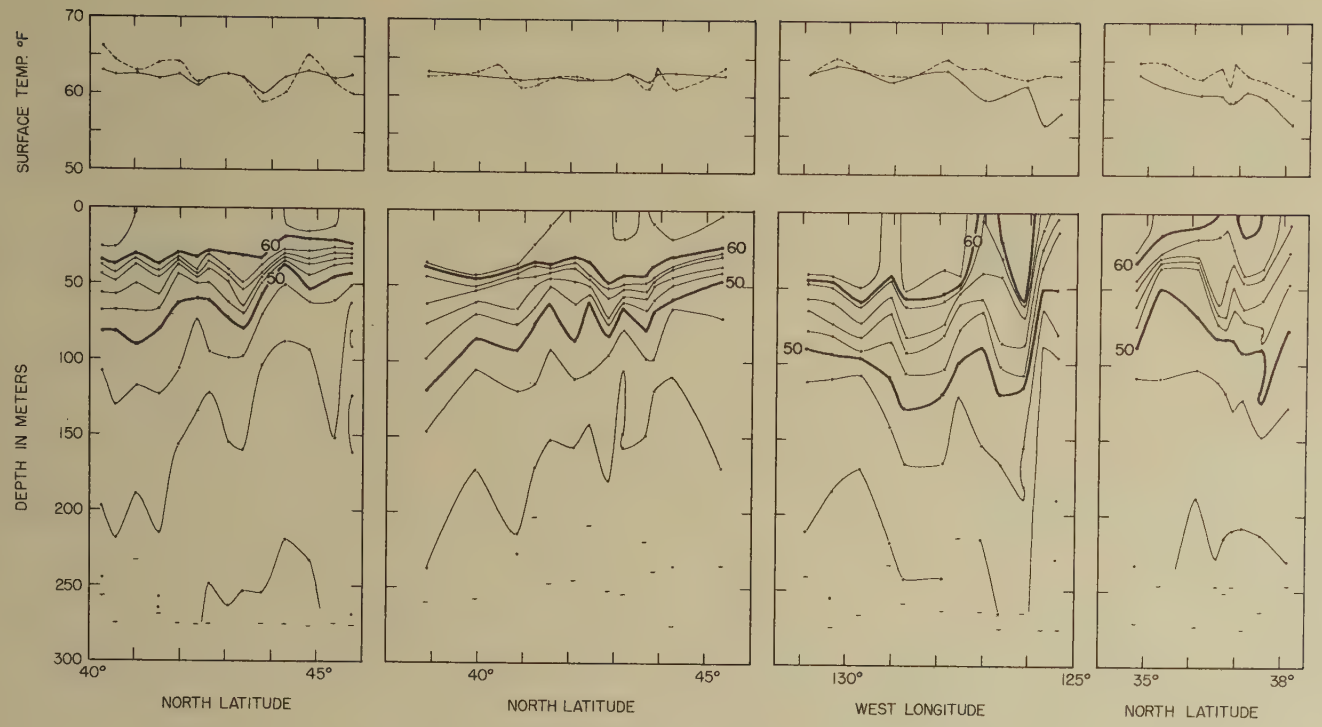



Figure 23.--Temperature sections from BT casts along Section G (see fig. 2), John R. Manning cruise 36 (NEPAS), June 11-August 20, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

Figure 24.--Same along Section H (fig. 2).

Figure 25.--Same along Section I (fig. 2).

Figure 26.--Same along Section J (fig. 2).

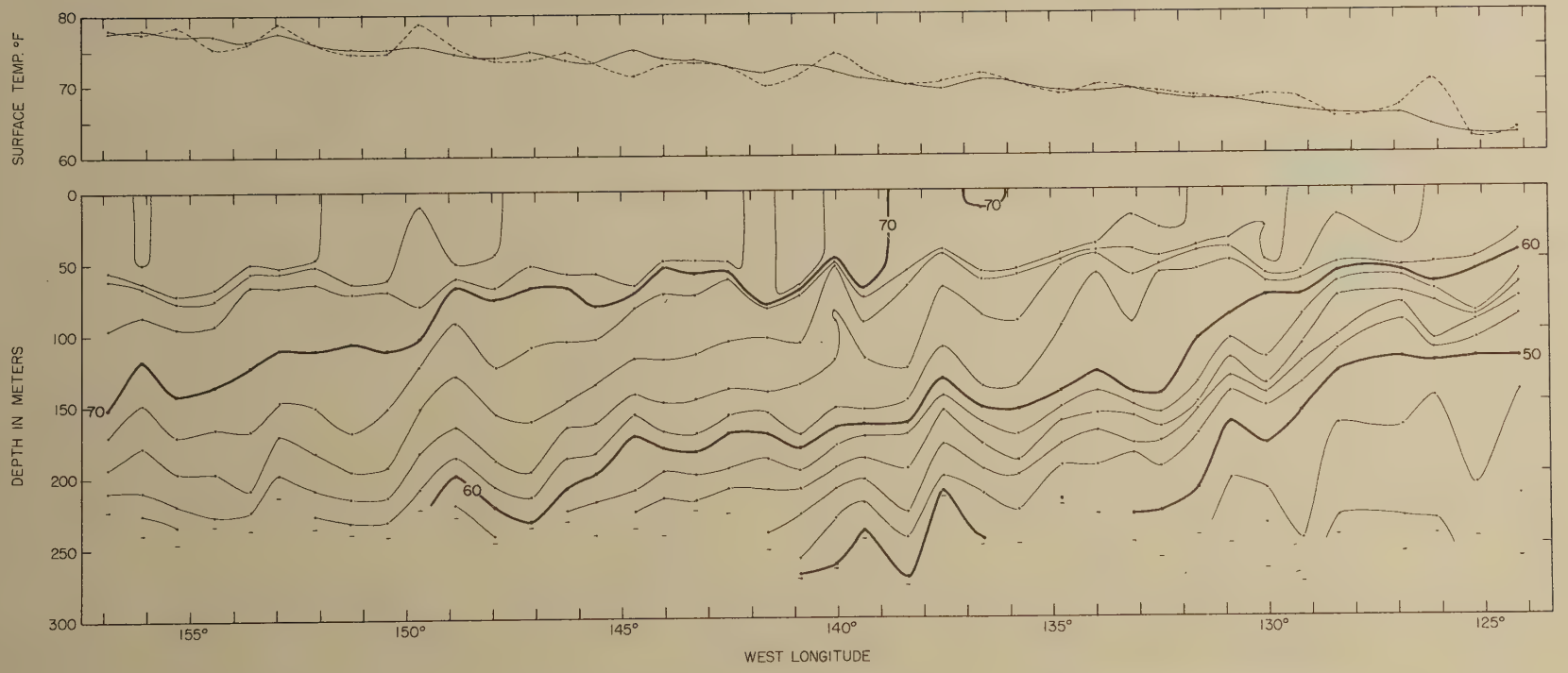



Figure 27.--Temperature sections from BT casts along Section K (see fig. 2), John R. Manning cruise 36 (NEPAS), June 11-August 20, 1957. Upper panel air (dotted) and sea surface (solid) temperatures. Lower panel temperatures from BT slides. Dashes indicate the depth of casts.

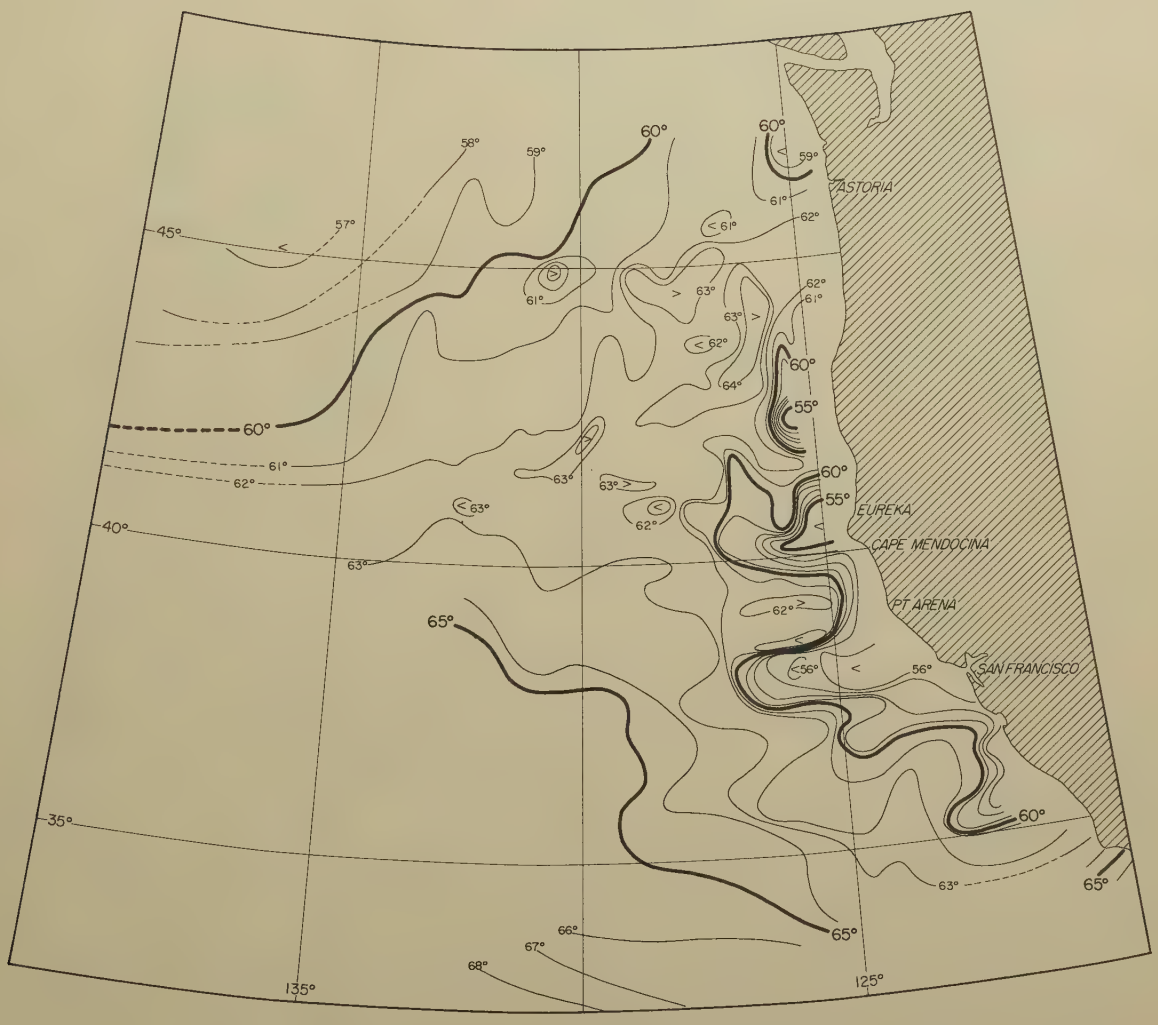



Figure 28.--Sea surface temperature in °F. in the NEPAS area based on observations from Hugh M. Smith cruise 40, July 1-September 5, 1957, John R. Manning cruise 36, June 11-August 20, 1957, and the charter vessels, July 22-August 1, 1957.

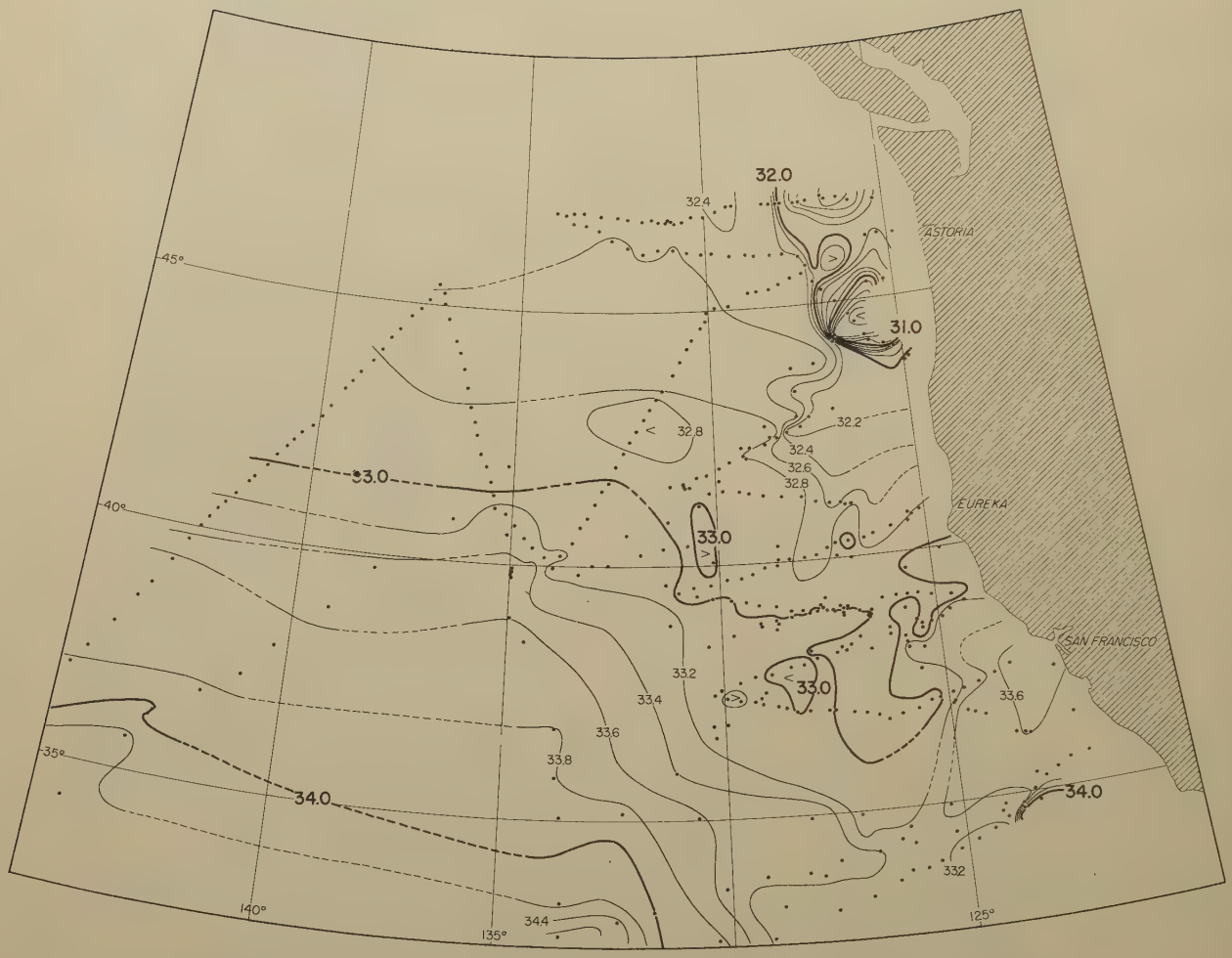



Figure 29.--Surface salinity in ‰ in the NEPAS area based on observations from Hugh M. Smith cruise 40, July 1-September 5, 1957, and John R. Manning cruise 36, June 11-August 20, 1957. Dots indicate observed values. Dashed lines indicate interpolated contours.

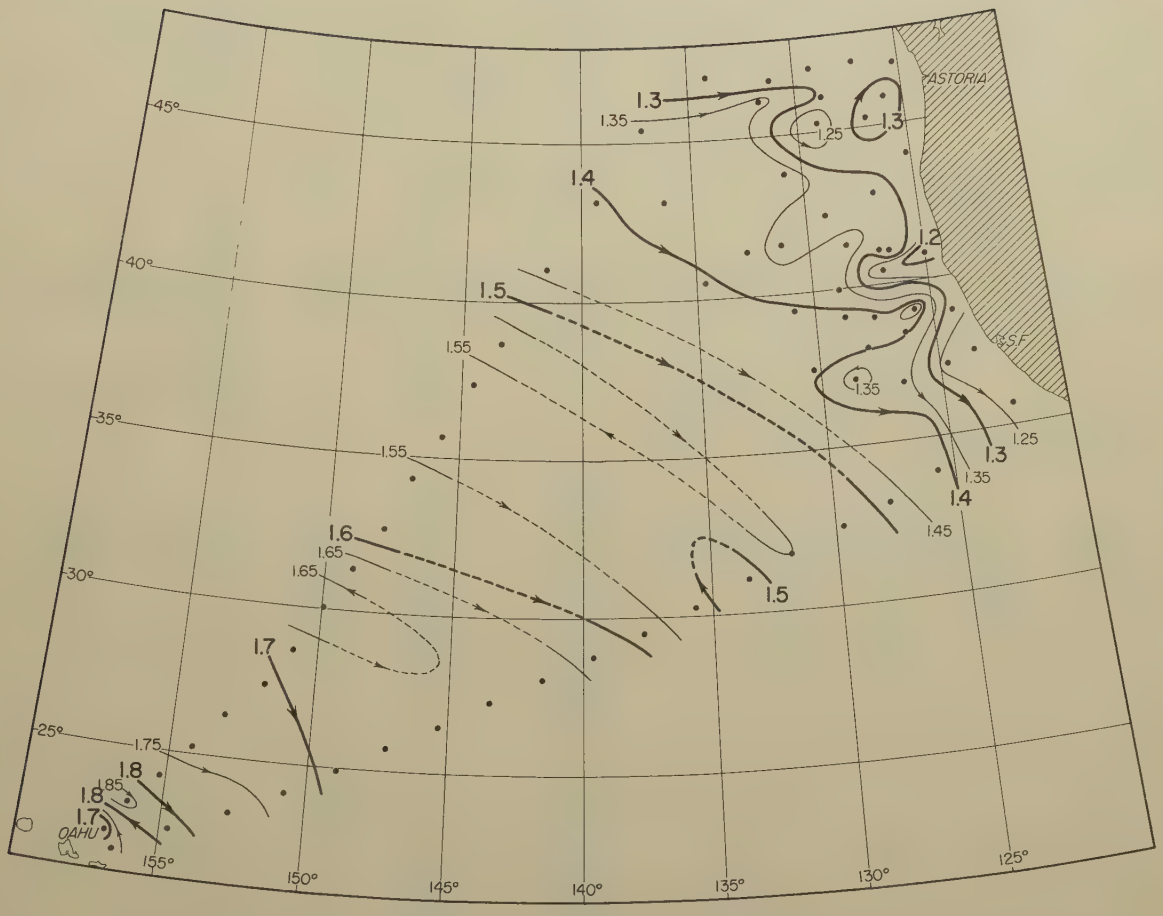



Figure 30.--Anomaly of geopotential topography of the sea surface relative to the 1,000-db. surface, Hugh M. Smith cruise 40 (NEPAS), July 1-September 5, 1957. Dots indicate station positions.

Table 1.--NEPAS charter vessel data

| Name | Owner[1/] | Home port | Observer | Organization |
|---|---|---|---|---|
| Allen Cody | Hunter and Foland (L. L. Newton, operator) | Fields Landing, California | Howard O. Yoshida | Honolulu Biological Laboratory |
| Flicker | Gus Wagner | Newport, Oregon | George Miller | Oregon Fish. Commission |
| Gypsy | Jim Lyons | Seattle, Washington | William Stickley | Washington Department of Fisheries |
| Lancing | Oscar Knudsen | Seattle, Washington | None | - |
| Lynn | Les Withee (Josh Bufton, operator) | Garibaldi, Oregon | None | - |
| Lynn Ann | Herman Foland | Fields Landing, California | Thomas S. Hida | Honolulu Biological Laboratory |
| Luwella | O. James Bardeau | San Diego, California | Tom Jow | California Department of Fish and Game |
| Rowland R. Sr. | William R. Roland | El Cerrito, California | None | - |
| Tuna Clipper | Erling Kolnes (Floyd M. Rhoades, operator) | San Pedro, California | Robert L. Caldwell | California Department of Fish and Game |

[1/] Except where operators are indicated, vessels were operated by the owners.

Table 2.--Positions and summary of observations taken at Hugh M. Smith cruise 40 (NEPAS) stations, July 1 - September 5, 1957 1/

| Station No. | Time GCT | Date 1957 | Position | | Hydro. cast | P | SD (m) | WC | UWB No. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude North | Longitude West | | | | | |
| 1 | 1818 | 7/2 | 22°21' | 156°55' | x | - | - | - | - |
| 2 | 2330 | 7/2 | 22°37' | 156°43' | - | 15 | - | - | - |
| 3 | 0620 | 7/3 | 23°12' | 156°16' | - | 30 | - | - | - |
| 4 | 1820 | 7/3 | 24°17' | 155°11' | x | - | 24 | 2 | - |
| 5 | 2339 | 7/3 | 24°40' | 154°47' | - | 15 | - | - | - |
| 6 | 0630 | 7/4 | 25°15' | 154°06' | x | 30 | - | - | - |
| 7 | 1814 | 7/4 | 26°20' | 153°01' | x | - | 26 | 3 | - |
| 8 | 2319 | 7/4 | 26°45' | 152°35' | - | 15 | - | - | - |
| 9 | 0620 | 7/5 | 27°25' | 151°50' | x | 30 | - | - | - |
| 10 | 1810 | 7/5 | 28°41' | 150°54' | x | - | - | - | - |
| 11 | 2317 | 7/5 | 29°11' | 150°32' | - | 15 | - | - | - |
| 12 | 0615 | 7/6 | 30°02' | 149°56' | x | 30 | - | - | - |
| 13 | 1720 | 7/6 | 31°16' | 148°54' | x | - | 33 | 0-1 | - |
| 14 | 2209 | 7/6 | 31°47' | 148°31' | - | 15 | - | - | - |
| 15 | 0510 | 7/7 | 32°44' | 147°49' | x | - | - | - | - |
| 16 | 0705 | 7/7 | 32°51' | 147°45' | - | 30 | - | - | - |
| 17 | 1714 | 7/7 | 34°12' | 146°44' | x | - | 35 | 1 | - |
| 18 | 2214 | 7/7 | 34°46' | 146°19' | - | 15 | - | - | - |
| 19 | 0512 | 7/8 | 35°46' | 145°38' | x | - | - | - | - |
| 20 | 0704 | 7/8 | 35°52' | 145°33' | - | 30 | - | - | - |
| 21 | 1712 | 7/8 | 37°17' | 144°28' | x | - | 30 | 3 | - |
| 22 | 2214 | 7/8 | 37°53' | 144°00' | - | 15 | - | - | - |
| 23 | 0552 | 7/9 | 38°47' | 143°20' | x | 30 | - | - | - |
| 24 | 2200 | 7/9 | 40°27' | 142°06' | - | 15 | 16-1/2 | 3 | - |
| 25 | 0543 | 7/10 | 41°03' | 141°30' | x | 30 | - | - | - |
| 26 | 1053 | 7/10 | 41°32' | 141°00' | - | 15 | - | - | - |
| 27 | 2202 | 7/10 | 42°24' | 140°06' | - | 15 | 16 | 4 | - |
| 28 | 0545 | 7/11 | 43°09' | 139°25' | x | 30 | - | - | - |
| 29 | 1222 | 7/11 | 43°52' | 138°44' | - | 15 | - | - | - |
| 30 | 2256 | 7/11 | 44°43' | 137°53' | - | 15 | 22 | 3 | - |
| 31 | 0545 | 7/12 | 45°24' | 137°12' | x | 30 | - | - | - |
| 32 | 2333 | 7/12 | 43°46' | 136°24' | - | 15 | - | - | - |
| 33 | 0525 | 7/13 | 43°03' | 136°10' | x | 30 | - | - | - |
| 34 | 2154 | 7/13 | 41°10' | 135°20' | - | 15 | - | - | - |
| 35 | 0615 | 7/14 | 40°33' | 134°37' | x | 30 | - | - | - |
| 36 | 2121 | 7/14 | 40°43' | 133°18' | - | 15 | 27 | 2 | - |
| 37 | 0505 | 7/15 | 41°29' | 132°46' | x | 30 | - | - | - |
| 38 | 2146 | 7/15 | 43°04' | 131°34' | - | 15 | 19 | 2 | - |
| 39 | 0334 | 7/16 | 43°33' | 131°09' | - | 15 | - | - | - |
| 40 | 0501 | 7/16 | 43°45' | 130°59' | x | 30 | - | - | - |
| 41 | 1911 | 7/16 | 44°49' | 130°02' | - | 15 | 19 | 3 | - |
| 42 | 2123 | 7/16 | 44°57' | 130°00' | - | 15 | 17 | 4 | - |
| 43 | 0458 | 7/17 | 45°12' | 129°03' | x | 30 | - | - | - |

1/ P - Surface plankton haul - duration in minutes.
SD - Secchi disc observation in meters
WC - Water color in the Forel scale.
UWB - University of Washington boron samples - number.

Table 2.--Positions and summary of observations taken at Hugh M. Smith cruise 40 (NEPAS) stations, July 1 - September 5, 1957 (cont'd)

| Station No. | Time GCT | Date 1957 | Position | | Hydro. cast | P | SD (m) | WC | UWB No. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude North | Longitude West | | | | | |
| 44 | 1330 | 7/17 | 45°26' | 128°06' | - | 15 | - | - | - |
| 45 | 2115 | 7/17 | 45°41' | 127°04' | - | 15 | - | - | - |
| 46 | 2312 | 7/17 | 45°43' | 126°48' | - | 15 | - | - | - |
| 47 | 0455 | 7/18 | 45°54' | 125°57' | x | 30 | - | - | - |
| Astoria | | | | | | | | | |
| 48 | 1335 | 7/22 | 46°54' | 125°15' | x | - | - | - | - |
| 49 | 2128 | 7/22 | 47°01' | 126°18' | - | 15 | 20 | 4 | - |
| 50 | 0018 | 7/23 | 47°02' | 126°35' | - | 15 | 18 | 4 | - |
| 51 | 0252 | 7/23 | 47°02' | 126°53' | - | 15 | - | - | - |
| 52 | 0534 | 7/23 | 47°02' | 127°12' | x | 30 | - | - | - |
| 53 | 1313 | 7/23 | 47°00' | 127°07' | - | 15 | - | - | - |
| 54 | 1529 | 7/23 | 47°00' | 127°18' | - | 15 | 17 | 5 | - |
| 55 | 2007 | 7/23 | 47°01' | 127°48' | - | 15 | 14 | 4 | - |
| 56 | 2150 | 7/23 | 47°01' | 127°48' | - | 15 | 11-1/2 | 4+ | - |
| 57 | 0505 | 7/24 | 47°00' | 129°08' | x | 30 | - | - | - |
| 58 | 2117 | 7/24 | 46°47' | 130°22' | - | 15 | 11 | 3+ | - |
| 59 | 0115 | 7/25 | 46°44' | 130°49' | - | 30 | 12 | 4+ | - |
| 60 | 0542 | 7/25 | 46°45' | 131°04' | x | 30 | - | - | - |
| 61 | 0722 | 7/25 | 46°46' | 130°49' | - | 30 | - | - | - |
| 62 | 2124 | 7/25 | 46°48' | 132°07' | - | 15 | 14 | 4 | - |
| 63 | 0122 | 7/26 | 46°51' | 132°46' | - | 15 | - | - | - |
| 64 | 0539 | 7/26 | 46°55' | 133°23' | - | 30 | - | - | - |
| 65 | 1210 | 7/26 | 46°58' | 134°03' | x | - | - | - | - |
| 66 | 0515 | 7/27 | 46°06' | 131°40' | x | - | - | - | - |
| 67 | 2118 | 7/27 | 46°06' | 130°04' | - | 15 | 16 | 4 | - |
| 68 | 2325 | 7/27 | 46°05' | 129°48' | - | 15 | 14 | 4 | - |
| 69 | 0505 | 7/28 | 46°01' | 128°55' | x | 30 | - | - | - |
| 70 | 2116 | 7/28 | 45°58' | 127°29' | - | 15 | 12 | 4+ | - |
| 71 | 0442 | 7/29 | 45°15' | 126°53' | x | 30 | - | - | - |
| 72 | 2147 | 7/29 | 44°20' | 125°54' | - | 15 | 17 | 3 | - |
| 73 | 0430 | 7/30 | 44°00' | 125°07' | x | 30 | - | - | - |
| 74 | 2119 | 7/30 | 43°18' | 126°00' | - | 15 | 18 | 5 | - |
| 75 | 0445 | 7/31 | 42°56' | 126°59' | x | 15 | - | - | - |
| 76 | 1417 | 7/31 | 42°47' | 127°15' | - | 15 | - | - | - |
| 77 | 1926 | 7/31 | 42°36' | 127°53' | - | 15 | - | - | - |
| 78 | 2111 | 7/31 | 42°32' | 128°05' | - | 15 | 26 | 4 | - |
| 79 | 0438 | 8/1 | 42°16' | 129°05' | x | 15 | - | - | - |
| 80 | 2117 | 8/1 | 41°48' | 130°13' | - | 15 | 23-1/2 | 2 | - |
| 81 | 0457 | 8/2 | 41°33' | 131°06' | x | 15 | - | - | - |
| 82 | 2119 | 8/2 | 41°26' | 129°26' | - | 15 | 28 | 3 | - |
| 83 | 0023 | 8/3 | 41°23' | 129°03' | - | 15 | 24 | 2 | - |
| 84 | 0440 | 8/3 | 41°18' | 128°25' | x | 15 | - | - | - |
| 85 | 2135 | 8/3 | 41°04' | 126°56' | x | 15 | 17 | 4 | - |
| 86 | 0045 | 8/4 | 41°02' | 126°41' | x | - | 17 | 4 | - |
| 87 | 0542 | 8/4 | 40°58' | 126°01' | - | 15 | - | - | - |
| 88 | 1740 | 8/4 | 40°48' | 125°01' | x | 15 | 12 | 5 | - |
| 89 | 2117 | 8/4 | 40°40' | 125°19' | - | 15 | - | - | - |
| 90 | 2257 | 8/4 | 40°37' | 125°30' | - | 15 | - | - | - |

Table 2.--Positions and summary of observations taken at Hugh M. Smith cruise 40 (NEPAS) stations, July 1 - September 5, 1957 (cont'd)

| Station No. | Time GCT | Date 1957 | Position | | Hydro. cast | P | SD (m) | WC | UWB No. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude North | Longitude West | | | | | |
| 91 | 0003 | 8/5 | 40°34' | 125°36' | - | 15 | - | - | - |
| 92 | 0517 | 8/5 | 40°26' | 126°16' | - | 15 | - | - | - |
| 93 | 1653 | 8/5 | 40°18' | 126°54' | x | - | 19 | 3 | - |
| 94 | 2113 | 8/5 | 40°12' | 127°23' | - | 15 | 15 | 4 | - |
| 95 | 0534 | 8/6 | 40°04' | 128°20' | - | 15 | - | - | - |
| 96 | 0800 | 8/6 | 39°51' | 128°57' | x | - | 23 | 2 | - |
| 97 | 2120 | 8/6 | 39°45' | 129°29' | - | 15 | 27 | 2 | - |
| 98 | 0532 | 8/7 | 39°32' | 130°42' | - | 15 | - | - | - |
| 99 | 1217 | 8/7 | 39°29' | 130°58' | x | - | - | - | 13 |
| 100 | 2121 | 8/7 | 39°17' | 129°45' | - | 15 | 25 | 2 | - |
| 101 | 0425 | 8/8 | 39°08' | 128°40' | x | 15 | - | - | - |
| 102 | 1338 | 8/8 | 39°02' | 128°21' | - | 15 | - | - | - |
| 103 | 1746 | 8/8 | 38°59' | 127°56' | - | 15 | - | - | - |
| 104 | 2235 | 8/8 | 39°00' | 127°33' | x | 15 | 25 | 1 | - |
| 105 | 0608 | 8/9 | 39°03' | 127°01' | - | 15 | - | - | - |
| 106 | 2039 | 8/9 | 39°11' | 125°37' | x | 15 | 21 | 2 | - |
| 107 | 2308 | 8/9 | 39°09' | 125°26' | - | 15 | - | - | - |
| 108 | 0413 | 8/10 | 39°00' | 124°35' | - | 15 | - | - | - |
| 109 | 0523 | 8/10 | 38°57' | 124°24' | - | 15 | - | - | - |
| 110 | 1210 | 8/10 | 38°54' | 124°21' | x | - | - | - | - |
| 111 | 1650 | 8/10 | 38°43' | 124°47' | - | 15 | - | - | - |
| 112 | 1926 | 8/10 | 38°37' | 125°01' | - | 15 | 20 | 4 | - |
| 113 | 0046 | 8/10 | 38°31' | 125°31' | - | 15 | 20 | 3 | - |
| 114 | 0328 | 8/11 | 38°26' | 126°01' | - | 15 | - | - | - |
| 115 | 0415 | 8/11 | 38°26' | 126°04' | x | - | - | - | - |
| 116 | 1749 | 8/11 | 39°10' | 127°26' | - | 15 | 29 | 2 | - |
| 117 | 2105 | 8/11 | 38°03' | 127°51' | x | 15 | 25 | 2 | - |
| 118 | 0353 | 8/12 | 37°53' | 128°34' | - | 15 | - | - | - |
| 119 | 1305 | 8/12 | 37°29' | 130°12' | x | 15 | - | - | - |
| 120 | 2115 | 8/12 | 37°19' | 129°20' | - | 15 | 31 | 1 | - |
| 121 | 2324 | 8/12 | 37°16' | 129°08' | - | 15 | - | - | - |
| 122 | 0202 | 8/13 | 37°11' | 128°46' | - | 15 | - | - | - |
| 123 | 0413 | 8/13 | 37°09' | 128°31' | x | 15 | - | - | - |
| 124 | 1522 | 8/13 | 37°02' | 128°13' | - | 15 | - | - | - |
| 125 | 2110 | 8/13 | 37°01' | 127°30' | - | 15 | - | - | - |
| 126 | 0407 | 8/14 | 36°52' | 126°35' | x | - | - | - | - |
| 127 | 2116 | 8/14 | 37°01' | 125°26' | - | 15 | - | - | - |
| 128 | 0125 | 8/15 | 37°06' | 125°04' | - | 15 | - | - | - |
| 129 | 0408 | 8/15 | 37°12' | 124°41' | x | - | - | - | - |
| 130 | 1012 | 8/15 | 37°26' | 123°53' | - | 15 | - | - | - |
| 131 | 1213 | 8/15 | 37°31' | 123°32' | x | - | - | - | - |
| Oakland | | | | | | | | | |
| 132 | 0546 | 8/26 | 36°43' | 122°25' | - | 15 | - | - | - |
| 133 | 1205 | 8/27 | 35°39' | 122°13' | x | - | - | - | - |
| 134 | 2113 | 8/27 | 35°14' | 123°13' | - | 15 | - | - | - |
| 135 | 0532 | 8/27 | 34°29' | 124°17' | - | 15 | - | - | - |
| 136 | 1305 | 8/28 | 33°54' | 125°36' | x | - | - | - | - |
| 137 | 2115 | 8/28 | 33°37' | 126°30' | - | 15 | 27 | 1+ | - |
| 138 | 0405 | 8/28 | 33°08' | 127°47' | x | 30 | - | - | - |

Table 2.--Positions and summary of observations taken at Hugh M. Smith cruise 40 (NEPAS) stations, July 1- September 5, 1957 (cont'd)

| Station No. | Time GCT | Date 1957 | Position | | Hydro. cast | P | SD (m) | WC | UWB No. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude North | Longitude West | | | | | |
| 139 | 1605 | 8/29 | 32°26' | 129°43' | x | - | 42 | - | - |
| 140 | 2104 | 8/29 | 32°10' | 130°28' | - | 15 | - | - | - |
| 141 | 0402 | 8/30 | 31°43' | 131°44' | x | 30 | - | - | - |
| 142 | 1605 | 8/30 | 31°01' | 133°36' | x | - | 36 | 1 | - |
| 143 | 2110 | 8/30 | 30°44' | 134°20' | - | 15 | - | - | - |
| 144 | 0405 | 8/31 | 30°14' | 135°33' | x | 30 | - | - | - |
| 145 | 1704 | 8/31 | 29°29' | 137°30' | x | - | 45 | 1 | - |
| 146 | 2206 | 8/31 | 29°12' | 138°23' | - | 15 | - | - | - |
| 147 | 0500 | 9/1 | 28°45' | 139°36' | x | 30 | - | - | 13 |
| 148 | 1706 | 9/1 | 28°01' | 141°30' | x | - | 36 | 1 | - |
| 149 | 2211 | 9/1 | 27°43' | 142°13' | - | 15 | - | - | - |
| 150 | 0501 | 9/2 | 27°16' | 143°27' | x | 30 | - | - | - |
| 151 | 1704 | 9/2 | 26°28' | 145°20' | x | - | 35 | 0-1 | - |
| 152 | 1205 | 9/2 | 26°10' | 146°01' | - | 15 | - | - | - |
| 153 | 0501 | 9/3 | 25°41' | 147°10' | x | 30 | - | - | - |
| 154 | 1706 | 9/3 | 24°55' | 148°00' | x | - | 36 | 1 | - |
| 155 | 1206 | 9/3 | 24°38' | 149°40' | - | 15 | - | - | - |
| 156 | 0601 | 9/4 | 24°07' | 150°51' | x | 30 | - | - | 13 |
| 157 | 1807 | 9/4 | 23°21' | 152°41' | x | - | 36 | 1-2 | - |
| 158 | 2308 | 9/4 | 23°04' | 153°23' | - | 15 | - | - | - |
| 159 | 0602 | 9/5 | 22°33' | 154°39' | x | 30 | - | - | - |
| 160 | 1807 | 9/5 | 21°45' | 156°30' | x | - | 31 | 1 | - |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 1 | 1810 | 7/2 | 22°21'N | 156°55'W | 77.2 | 080 | 21 | 77.7 | 71.3 | 1021 | 02 | 6 | 5 | 8 | 4 | XX | X | - | - |
| 2 | 2040 | 7/2 | 22°21'N | 156°55'W | 76.7 | 070 | 19 | 78.0 | 71.2 | 1021 | 60 | 6 | 5 | 8 | 4 | XX | X | - | - |
| 3 | 0010 | 7/3 | 22°38'N | 156°42'W | 76.7 | 020 | 19 | 77.9 | 71.9 | 1020 | 02 | 6 | 4 | 8 | 4 | XX | X | - | - |
| 4 | 0300 | 7/3 | 22°54'N | 156°30'W | 76.7 | 040 | 20 | 77.0 | 71.2 | 1019 | 01 | 5,8 | 2 | 8 | 4 | 040 | 3 | - | - |
| 5 | 0610 | 7/3 | 23°12'N | 156°16'W | 76.3 | 060 | 22 | 76.8 | 70.3 | 1021 | 03 | 6,8 | 7 | 8 | 3 | XX | X | - | - |
| 6 | 0730 | 7/3 | 23°12'N | 156°16'W | 76.3 | 060 | 22 | 76.8 | 70.3 | 1021 | 03 | 6,8 | 7 | 8 | 3 | XX | X | - | - |
| 7 | 1130 | 7/3 | 23°34'N | 155°53'W | 78.0 | 070 | 18 | 75.5 | 72.1 | 1019 | 01 | 6 | 7 | 8 | 3 | XX | X | - | - |
| 8 | 1505 | 7/3 | 23°57'N | 155°30'W | 76.2 | 020 | 15 | 75.5 | 71.8 | 1019 | 02 | 8 | 3 | 8 | 3 | XX | X | - | - |
| 9 | 1805 | 7/3 | 24°17'N | 155°11'W | 76.8 | 060 | 17 | 77.2 | 72.8 | 1019 | 02 | 8 | 2 | 9 | 2 | XX | X | - | - |
| 10 | 1930 | 7/3 | 24°17'N | 155°11'W | 76.7 | 060 | 17 | 77.2 | 72.8 | 1019 | 02 | 8 | 2 | 9 | 2 | 060 | 1 | - | - |
| 11 | 2315 | 7/3 | 24°40'N | 154°47'W | 76.0 | 060 | 14 | 78.8 | 72.2 | 1019 | 02 | 3,8 | 3 | 9 | 2 | 060 | 1 | - | - |
| 12 | 0305 | 7/4 | 24°58'N | 154°25'W | 77.2 | 080 | 12 | 79.8 | 72.0 | 1019 | 02 | 8,5 | 2 | 9 | 2 | 080 | 1 | - | - |
| 13 | 0605 | 7/4 | 25°15'N | 154°06'W | 75.8 | 080 | 16 | 76.7 | 71.3 | 1019 | 02 | 8 | 2 | 9 | 2 | 060 | 1 | - | - |
| 14 | 0735 | 7/4 | 25°15'N | 154°06'W | 75.9 | 080 | 11 | 76.6 | 71.3 | 1019 | 02 | 8 | 2 | 9 | 2 | XX | X | - | - |
| 15 | 1130 | 7/4 | 25°37'N | 153°44'W | 75.8 | 090 | 15 | 75.4 | 70.6 | 1021 | 02 | X | X | 9 | 2 | XX | X | - | - |
| 16 | 1500 | 7/4 | 26°00'N | 153°21'W | 75.8 | 100 | 10 | 72.7 | 70.1 | 1021 | 62 | 8 | 7 | 7 | 2 | 050 | 1 | - | - |
| 17 | 1800 | 7/4 | 26°20'N | 153°01'W | 74.8 | 070 | 11 | 75.3 | 70.8 | 1023 | 02 | 8 | 2 | 9 | 2 | 070 | 1 | - | - |
| 18 | 1910 | 7/4 | 26°20'N | 153°01'W | 75.0 | 070 | 13 | 76.4 | 70.8 | 1023 | 02 | 5,8 | 2 | 9 | 2 | 080 | 1 | - | - |
| 19 | 2305 | 7/4 | 26°45'N | 152°35'W | 75.0 | 080 | 15 | 79.0 | 72.0 | 1023 | 02 | 5,8 | 2 | 9 | 2 | 080 | 1 | 35.52 | - |
| 20 | 0350 | 7/5 | 27°11'N | 152°04'W | 74.9 | 060 | 16 | 77.7 | 71.9 | 1023 | 03 | 5,8 | 4 | 9 | 2 | 070 | 1 | 35.39 | - |
| 21 | 0605 | 7/5 | 27°25'N | 151°50'W | 75.9 | 090 | 15 | 76.0 | 71.0 | 1024 | 03 | 6 | 6 | 9 | 2 | 070 | 1 | - | - |
| 22 | 0715 | 7/5 | 27°25'N | 151°50'W | 75.9 | 070 | 14 | 75.3 | 70.2 | 1025 | 02 | 6 | 6 | 9 | 2 | XX | X | - | - |
| 23 | 1130 | 7/5 | 27°53'N | 151°30'W | 75.1 | 080 | 15 | 73.9 | 69.2 | 1025 | 50 | X | X | 6 | 2 | XX | X | 35.30 | - |
| 24 | 1500 | 7/5 | 28°18'N | 151°10'W | 74.2 | 040 | 10 | 73.3 | 68.0 | 1026 | 00 | 4,8 | 6 | 9 | 2 | 050 | 1 | 35.28 | - |
| 25 | 1805 | 7/5 | 28°41'N | 150°54'W | 74.4 | 070 | 18 | 73.8 | 69.6 | 1026 | 02 | 2 | 8 | 9 | 3 | 060 | 2 | - | - |
| 26 | 1910 | 7/5 | 28°41'N | 150°54'W | 74.6 | 070 | 18 | 73.8 | 69.6 | 1026 | 02 | 2 | 8 | 9 | 3 | 060 | 3 | - | - |
| 27 | 2305 | 7/5 | 29°11'N | 150°32'W | 74.2 | 080 | 14 | 76.9 | 70.4 | 1026 | 02 | 1 | 8 | 9 | 2 | 080 | 1 | 35.43 | - |
| 28 | 0300 | 7/6 | 29°38'N | 150°13'W | 74.2 | 070 | 17 | 73.4 | 67.5 | 1026 | 03 | 4,7,8 | 8 | 9 | 2 | 070 | 1 | 35.43 | - |
| 29 | 0610 | 7/6 | 30°02'N | 149°56'W | 73.8 | 030 | 13 | 72.8 | 67.2 | 1026 | 02 | 6,8 | 8 | 9 | 2 | 070 | 1 | - | - |
| 30 | 0715 | 7/6 | 30°02'N | 149°56'W | 73.6 | 040 | 14 | 71.8 | 66.8 | 1026 | 50 | X | X | 8 | 2 | XX | X | - | - |
| 31 | 1130 | 7/6 | 30°32'N | 149°31'W | 72.9 | 070 | 20 | 71.8 | 67.6 | 1025 | 00 | X | X | 8 | 2 | XX | X | 35.25 | - |
| 32 | 1505 | 7/6 | 31°00'N | 149°08'W | XXX | 070 | 13 | 72.2 | 66.4 | 1026 | 03 | 4,0 | 7 | 8 | 2 | 070 | 1 | 35.34 | - |
| 33 | 1710 | 7/6 | 31°16'N | 148°54'W | 72.7 | 030 | 13 | 72.5 | 65.3 | 1026 | 02 | 8 | 8 | 9 | 2 | 030 | 1 | - | - |
| 34 | 1820 | 7/6 | 31°16'N | 148°54'W | 73.7 | 010 | 13 | 72.1 | 65.7 | 1026 | 02 | 8 | 8 | 9 | 2 | 020 | 1 | - | - |
| 35 | 2200 | 7/6 | 31°47'N | 148°31'W | 73.6 | 050 | 12 | 75.6 | 69.2 | 1027 | 02 | 4,8 | 7 | 9 | 2 | 030 | 1 | 34.97 | - |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 36 | 0205 | 7/7 | 32°18'N | 148°08'W | 73.3 | 040 | 13 | 74.8 | 68.5 | 1026 | 60 | 4,8 | 7 | 9 | 2 | 050 | 1 | - | - |
| 37 | 0510 | 7/7 | 32°44'N | 147°49'W | 73.2 | 080 | 07 | 72.7 | 68.3 | 1026 | 02 | 8 | 2 | 9 | 2 | 050 | 1 | - | - |
| 38 | 0605 | 7/7 | 32°44'N | 147°49'W | 73.0 | 080 | 07 | 72.7 | 68.3 | 1026 | 02 | 8 | 2 | 9 | 2 | 050 | 1 | - | - |
| 39 | 1105 | 7/7 | 33°20'N | 147°23'W | 71.6 | 060 | 07 | 70.2 | 65.6 | 1026 | 01 | X | X | 8 | 2 | XX | 1 | 34.83 | - |
| 40 | 1400 | 7/7 | 33°46'N | 147°04'W | 71.8 | 020 | 06 | 69.0 | 65.1 | 1025 | 02 | 8 | 1 | 9 | 1 | 080 | 1 | 34.69 | - |
| 41 | 1710 | 7/7 | 34°12'N | 146°44'W | 71.0 | 020 | 08 | 70.0 | 65.8 | 1025 | 02 | 8 | 1 | 9 | 1 | XX | 1 | - | - |
| 42 | 1810 | 7/7 | 34°12'N | 146°44'W | 70.9 | 020 | 08 | 70.0 | 65.8 | 1025 | 02 | 8 | 1 | 9 | 1 | 030 | 1 | - | - |
| 43 | 2205 | 7/7 | 34°46'N | 146°19'W | 75.4 | 030 | 03 | 73.6 | 66.0 | 1026 | 02 | 5,8 | 1 | 9 | 1 | 010 | 1 | 34.42 | - |
| 44 | 0205 | 7/8 | 35°21'N | 145°55'W | 74.1 | 250 | 05 | 73.8 | 67.2 | 1025 | 01 | 8 | 1 | 9 | 1 | 140 | 1 | 34.47 | - |
| 45 | 0500 | 7/8 | 35°46'N | 145°38'W | 71.9 | 260 | 07 | 71.9 | 67.5 | 1025 | 03 | 8 | 2 | 9 | 1 | XX | X | - | - |
| 46 | 0605 | 7/8 | 35°46'N | 145°38'W | 71.3 | 250 | 09 | 71.3 | 66.8 | 1025 | 03 | 8 | 2 | 9 | 1 | XX | X | - | 0.40 |
| 47 | 1105 | 7/8 | 36°23'N | 145°10'W | 69.0 | 260 | 15 | 69.8 | 67.7 | 1024 | 02 | 8 | 2 | 9 | 2 | XX | X | 34.23 | - |
| 48 | 1400 | 7/8 | 36°50'N | 144°49'W | 68.6 | 250 | 09 | 69.2 | 66.0 | 1023 | 01 | 5,6 | 7 | 8 | 2 | 300 | 1 | 33.87 | - |
| 49 | 1705 | 7/8 | 37°17'N | 144°28'W | 68.3 | 270 | 10 | 68.7 | 66.6 | 1023 | 02 | 2,8 | 1 | 9 | 2 | 290 | 1 | - | - |
| 50 | 1805 | 7/8 | 37°17'N | 144°28'W | 68.3 | 270 | 10 | 68.7 | 66.6 | 1023 | 02 | 2,8 | 1 | 9 | 2 | 290 | 1 | - | - |
| 51 | 2205 | 7/8 | 37°53'N | 144°00'W | 67.2 | 210 | 13 | 72.1 | 69.2 | 1022 | 03 | 2,8 | 2 | 9 | 2 | 300 | 1 | 33.75 | - |
| 52 | 0200 | 7/9 | 38°27'N | 143°35'W | 66.4 | 230 | 16 | 69.6 | 67.1 | 1021 | 02 | 3,6 | 7 | 8 | 2 | 270 | 1 | 33.69 | - |
| 53 | 0510 | 7/9 | 38°47'N | 143°20'W | 66.0 | 240 | 20 | 68.1 | 67.0 | 1019 | 03 | 4,8 | 8 | 8 | 3 | 260 | 2 | - | 0.37 |
| 53A | 0650 | 7/9 | 38°47'N | 143°20'W | 66.0 | 230 | 22 | 67.8 | 66.3 | 1019 | 63 | 8 | 8 | 8 | 3 | 260 | 2 | - | - |
| 54 | 1100 | 7/9 | 39°18'N | 142°59'W | 64.5 | 260 | 23 | 66.8 | 65.2 | 1016 | 63 | X | 8 | 6 | 3 | 270 | 3 | 33.66 | - |
| 55 | 1400 | 7/9 | 39°44'N | 142°40'W | 63.4 | 350 | 18 | 64.5 | 63.0 | 1015 | 02 | 8,0 | 8 | 7 | 3 | 250 | 3 | 33.49 | - |
| 56 | 1715 | 7/9 | 40°01'N | 142°28'W | 63.7 | 010 | 14 | 64.2 | 62.7 | 1015 | 02 | 8,6,0 | 8 | 7 | 3 | 250 | 3 | 33.21 | - |
| 57 | 1915 | 7/9 | 40°13'N | 142°18'W | 63.3 | 250 | 10 | 63.9 | 62.3 | 1015 | 02 | 8,0 | 7 | 9 | 3 | 240 | 3 | 33.28 | - |
| 58 | 2130 | 7/9 | 40°26'N | 142°08'W | 63.1 | 250 | 10 | 64.0 | 62.2 | 1015 | 02 | 0,6,8 | 8 | 9 | 3 | 240 | 3 | 33.21 | 0.10 |
| 59 | 0000 | 7/10 | 40°35'N | 141°57'W | 62.1 | 030 | 25 | 61.7 | 58.9 | 1017 | 15 | 0,6 | 8 | 7 | 3 | 010 | 3 | 33.21 | 0.34 |
| 60 | 0235 | 7/10 | 40°48'N | 141°45'W | 62.5 | 030 | 24 | 60.8 | 57.8 | 1017 | 02 | 8,0,6 | 8 | 7 | 3 | 030 | 3 | 33.19 | 0.16 |
| 61 | 0535 | 7/10 | 41°03'N | 141°30'W | 62.4 | 020 | 21 | 62.3 | 60.0 | 1020 | 00 | X | 7 | 8 | 4 | 020 | 3 | - | 0.36 |
| 62 | 0645 | 7/10 | 41°03'N | 141°30'W | 62.4 | 020 | 21 | 62.3 | 60.0 | 1020 | 00 | X | 7 | 8 | 4 | 020 | 3 | - | - |
| 63 | 0830 | 7/10 | 41°10'N | 141°22'W | 61.5 | 020 | 18 | 59.6 | 55.9 | 1021 | 02 | X | 7 | 8 | 4 | 020 | 3 | 33.17 | - |
| 64 | 1005 | 7/10 | 41°26'N | 141°05'W | 60.5 | 030 | 15 | 58.0 | 52.3 | 1021 | 01 | 8 | 2 | 7 | 3 | XX | X | 33.01 | - |
| 65 | 1200 | 7/10 | 41°38'N | 140°54'W | 60.2 | 000 | 12 | 57.5 | 52.2 | 1021 | 01 | 8 | 2 | 7 | 3 | XX | X | 32.97 | - |
| 66 | 1400 | 7/10 | 41°49'N | 140°42'W | 59.4 | 340 | 13 | 57.7 | 54.5 | 1021 | 03 | 4,8 | 4 | 9 | 3 | 010 | 1 | 32.97 | 0.20 |
| 67 | 1635 | 7/10 | 42°01'N | 140°31'W | 59.0 | 030 | 14 | 57.7 | 54.8 | 1022 | 03 | 6,8 | 6 | 9 | 3 | 010 | 1 | 33.01 | 0.35 |
| 68 | 1900 | 7/10 | 42°12'N | 140°19'W | 59.0 | 350 | 14 | 57.7 | 53.2 | 1023 | 02 | 6,8 | 7 | 9 | 3 | 010 | 1 | 32.94 | - |
| 69 | 2135 | 7/10 | 42°23'N | 140°07'W | 59.9 | 350 | 05 | 59.0 | 56.0 | 1023 | 01 | 6,8 | 6 | 9 | 2 | 010 | 1 | 32.95 | 0.31 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 70 | 0000 | 7/11 | 42°35'N | 139°56'W | 59.5 | 350 | 11 | 58.6 | 56.0 | 1023 | 03 | 6,8,0 | 7 | 9 | 2 | 010 | 1 | 32.84 | 0.38 |
| 71 | 0235 | 7/11 | 42°49'N | 139°44'W | 60.3 | 320 | 09 | 57.6 | 57.2 | 1022 | 02 | 6 | 7 | 9 | 2 | 010 | 1 | 32.94 | 0.22 |
| 72 | 0535 | 7/11 | 43°09'N | 139°25'W | 59.2 | 280 | 10 | 57.5 | 53.6 | 1023 | 03 | 6 | 8 | 9 | 2 | 330 | 1 | - | 0.41 |
| 73 | 0645 | 7/11 | 43°09'N | 139°25'W | 59.0 | 280 | 10 | 57.5 | 53.6 | 1023 | 03 | 6 | 8 | 9 | 2 | 330 | 1 | - | - |
| 74 | 0830 | 7/11 | 43°21'N | 139°15'W | 58.7 | 270 | 10 | 57.8 | 55.8 | 1022 | 03 | 6,8 | 8 | 7 | 2 | XX | 1 | 32.86 | 0.24 |
| 75 | 1000 | 7/11 | 43°32'N | 139°03'W | 58.4 | 260 | 10 | 57.0 | 53.9 | 1021 | 02 | 6,8 | 8 | 8 | 3 | XX | X | 32.90 | 0.30 |
| 76 | 1210 | 7/11 | 43°49'N | 138°47'W | 57.8 | 250 | 11 | 57.7 | 53.5 | 1021 | 02 | 6,8 | 8 | 8 | 3 | XX | X | 32.88 | 0.62 |
| 77 | 1400 | 7/11 | 44°02'N | 138°33'W | 57.8 | 220 | 07 | 56.8 | 54.0 | 1020 | 02 | 6,8 | 8 | 9 | 2 | 310 | 1 | 32.75 | 0.34 |
| 78 | 1630 | 7/11 | 44°16'N | 138°20'W | 56.9 | 220 | 10 | 57.0 | 54.5 | 1020 | 02 | 6,8 | 8 | 9 | 3 | 310 | 1 | 32.74 | 0.39 |
| 79 | 1900 | 7/11 | 44°29'N | 138°07'W | 57.5 | 230 | 10 | 59.0 | 53.0 | 1018 | 02 | 6,8 | 8 | 9 | 3 | 310 | 1 | 32.72 | 0.32 |
| 80 | 2135 | 7/11 | 44°42'N | 137°54'W | 57.6 | 220 | 14 | 60.1 | 56.3 | 1021 | 02 | 6,8 | 8 | 9 | 2 | 310 | 1 | 32.66 | 0.55 |
| 81 | 0000 | 7/12 | 44°54'N | 137°42'W | 57.0 | 160 | 14 | 60.1 | 57.2 | 1020 | 02 | 6,8 | 8 | 9 | 2 | 350 | 2 | 32.74 | 0.44 |
| 82 | 0230 | 7/12 | 45°07'N | 137°29'W | 57.0 | 130 | 11 | 58.0 | 57.9 | 1015 | 50 | 6,8 | 8 | 8 | 2 | 340 | 2 | 32.68 | 0.57 |
| 83 | 0535 | 7/12 | 45°24'N | 137°12'W | 56.9 | 150 | 14 | 56.9 | 56.4 | 1013 | 50 | 6,8 | 8 | 8 | 2 | 340 | 2 | - | 0.59 |
| 84 | 0650 | 7/12 | 45°24'N | 137°12'W | 56.8 | 150 | 14 | 56.9 | 56.9 | 1013 | 50 | 6,8 | 8 | 8 | 2 | 340 | 2 | - | - |
| 85 | 0845 | 7/12 | 45°15'N | 137°07'W | 56.9 | 130 | 23 | 57.4 | 57.3 | 1012 | 50 | X | X | 8 | 3 | XX | X | 32.66 | 0.47 |
| 86 | 1000 | 7/12 | 45°03'N | 137°01'W | 56.8 | 130 | 22 | 57.3 | 57.2 | 1009 | 61 | X | X | 6 | 3 | XX | X | 32.68 | 0.43 |
| 87 | 1200 | 7/12 | 44°48'N | 136°53'W | 57.0 | 080 | 26 | 57.0 | 57.0 | 1006 | 63 | X | X | 6 | 4 | XX | X | 32.72 | 0.42 |
| 88 | 1705 | 7/12 | 44°22'N | 136°38'W | 57.3 | 090 | 26 | 57.8 | 57.7 | 1002 | 63 | 6,8 | 8 | 6 | 5 | 150 | 3 | 32.61 | 0.49 |
| 89 | 2010 | 7/12 | 44°06'N | 136°31'W | 57.7 | 250 | 13 | 60.8 | 59.0 | XXX | 01 | 6,8 | 7 | 9 | 4 | 080 | 3 | 32.86 | 0.40 |
| 90 | 2300 | 7/12 | 43°48'N | 136°24'W | 58.7 | 240 | 11 | 59.1 | 58.5 | 1001 | 42 | 6,8 | 8 | 7 | 3 | 180 | 3 | 32.77 | 0.37 |
| 91 | 0235 | 7/13 | 43°24'N | 136°17'W | 59.5 | 150 | 07 | 61.8 | 59.0 | 1002 | 07 | 6,8 | 7 | 7 | 3 | 160 | 3 | 32.77 | 0.37 |
| 92 | 0515 | 7/13 | 43°03'N | 136°10'W | 59.3 | 310 | 06 | 61.3 | 58.9 | 1002 | 03 | 6,8 | 8 | 9 | 3 | XX | X | - | NS |
| 93 | 0620 | 7/13 | 43°03'N | 136°10'W | 59.3 | 310 | 06 | 61.3 | 58.9 | 1002 | 03 | 6,8 | 8 | 9 | 3 | XX | X | - | - |
| 94 | 0830 | 7/13 | 42°45'N | 136°02'W | 59.5 | 300 | 06 | 62.5 | 60.8 | 1003 | 02 | 6,8 | 8 | 8 | 3 | XX | X | 32.88 | 0.37 |
| 95 | 1000 | 7/13 | 42°30'N | 135°56'W | 59.7 | 290 | 10 | 62.5 | 59.0 | 1004 | 02 | 6,8 | 8 | 7 | 3 | XX | X | 32.88 | 0.49 |
| 96 | 1200 | 7/13 | 42°09'N | 135°48'W | 60.2 | 290 | 10 | 61.2 | 58.2 | 1004 | 02 | 6,8 | 8 | 7 | 3 | XX | 1 | 32.88 | 0.35 |
| 97 | 1405 | 7/13 | 41°52'N | 135°40'W | 60.3 | 320 | 22 | 61.0 | 57.8 | 1005 | 02 | 6,8 | 8 | 8 | 4 | 310 | 4 | 32.88 | 0.37 |
| 98 | 1645 | 7/13 | 41°37'N | 135°33'W | 60.9 | 320 | 21 | 61.2 | 58.0 | 1007 | 50 | 6,8 | 8 | 8 | 4 | 310 | 4 | 32.94 | 0.76 |
| 99 | 1900 | 7/13 | 41°23'N | 135°28'W | 61.6 | 320 | 25 | 61.2 | 57.4 | 1010 | 02 | 6,8 | 8 | 9 | 4 | 310 | 4 | 33.01 | 0.36 |
| 100 | 2130 | 7/13 | 41°10'N | 135°20'W | 62.3 | 310 | 19 | 60.8 | 58.2 | 1011 | 01 | 6,8 | 5 | 9 | 4 | 310 | 4 | 33.22 | 0.37 |
| 101 | 0000 | 7/14 | 40°59'N | 135°08'W | 62.7 | 340 | 21 | 62.8 | 58.0 | 1012 | 01 | 6,8 | 4 | 9 | 4 | 330 | 4 | 33.26 | 0.33 |
| 102 | 0230 | 7/14 | 40°47'N | 134°53'W | 62.8 | 310 | 21 | 63.2 | 58.7 | 1012 | 02 | 8 | 4 | 9 | 4 | 310 | 4 | 33.30 | 0.27 |
| 103 | 0510 | 7/14 | 40°34'N | 134°39'W | 62.7 | 290 | 17 | 61.8 | 59.2 | 1016 | 02 | 8 | 4 | 9 | 4 | 310 | 4 | - | 0.50 |
| 104 | 0720 | 7/14 | 40°33'N | 134°37'W | 62.7 | 290 | 17 | 61.8 | 59.2 | 1016 | 02 | 8 | 4 | 9 | 4 | 310 | 4 | - | - |

Table 3. -- Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Baro-meter, mb. | Wea-ther | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 105 | 0900 | 7/14 | 40°23'N | 134°26'W | 62.7 | 270 | 08 | 63.2 | 60.0 | 1017 | 02 | X | X | 9 | 4 | XX | 4 | 33.26 | 0.35 |
| 106 | 1100 | 7/14 | 40°08'N | 134°10'W | 62.9 | 300 | 06 | 64.2 | 59.8 | 1017 | 02 | 6, 8 | 2 | 9 | 3 | XX | X | 33.21 | 0.36 |
| 107 | 1300 | 7/14 | 39°58'N | 133°59'W | 62.8 | 310 | 19 | 62.4 | 57.5 | 1019 | 02 | 6, 8 | 7 | 9 | 3 | 320 | 1 | 33.19 | 0.43 |
| 108 | 1530 | 7/14 | 40°12'N | 133°45'W | 62.9 | 300 | 15 | 62.2 | 57.0 | 1020 | 16 | 6, 8 | 8 | 8 | 3 | 320 | 2 | 33.21 | - |
| 109 | 1830 | 7/14 | 40°29'N | 133°30'W | 62.6 | 320 | 09 | 62.1 | 59.8 | 1022 | 03 | 6, 8 | 8 | 9 | 3 | 080 | 1 | 33.08 | 0.30 |
| 110 | 2100 | 7/14 | 40°43'N | 133°18'W | 62.7 | 330 | 15 | 62.5 | 58.2 | 1023 | 02 | 6, 8 | 8 | 9 | 3 | 070 | 2 | 33.06 | 0.43 |
| 111 | 2330 | 7/14 | 40°55'N | 133°10'W | 62.3 | 310 | 09 | 62.3 | 56.6 | 1024 | 01 | 6, 8 | 6 | 9 | 3 | 310 | 2 | 33.04 | 0.47 |
| 112 | 0200 | 7/15 | 41°12'N | 132°58'W | 62.2 | 320 | 12 | 62.0 | 58.0 | 1024 | 02 | 6, 8 | 7 | 9 | 3 | 260 | 1 | 33.01 | 0.35 |
| 113 | 0500 | 7/15 | 41°29'N | 132°46'W | 61.8 | 280 | 10 | 60.0 | 58.8 | 1025 | 02 | 6, 8 | 7 | 9 | 3 | 270 | 2 | - | 0.49 |
| 114 | 0605 | 7/15 | 41°29'N | 132°46'W | 61.7 | 280 | 10 | 60.0 | 58.8 | 1025 | 02 | 6, 8 | 7 | 9 | 3 | 270 | 2 | - | - |
| 115 | 0800 | 7/15 | 41°40'N | 132°38'W | 61.3 | 310 | 12 | 60.8 | 58.3 | 1026 | 02 | X | X | 9 | 3 | XX | X | 33.01 | 0.11 |
| 116 | 1000 | 7/15 | 41°57'N | 132°27'W | 60.8 | 300 | 15 | 61.1 | 57.7 | 1026 | 00 | X | X | 9 | 3 | XX | X | 32.94 | 0.49 |
| 117 | 1200 | 7/15 | 42°14'N | 132°15'W | 61.2 | 310 | 19 | 60.6 | 59.2 | 1026 | 00 | X | X | 9 | 3 | XX | X | 32.88 | 0.49 |
| 118 | 1400 | 7/15 | 42°27'N | 132°05'W | 60.8 | 330 | 17 | 60.2 | 56.0 | 1026 | 02 | 6, 8 | 8 | 9 | 3 | 270 | 1 | 33.68 | 0.52 |
| 119 | 1630 | 7/15 | 42°41'N | 131°54'W | 60.9 | 320 | 12 | 59.7 | 55.1 | 1027 | 50 | 6, 8 | 8 | 8 | 3 | 320 | 2 | 32.77 | 0.49 |
| 120 | 1835 | 7/15 | 42°52'N | 131°44'W | 60.8 | 290 | 09 | 58.7 | 55.4 | 1027 | 02 | 6, 8 | 8 | 9 | 2 | 310 | 2 | 32.74 | 0.77 |
| 121 | 2113 | 7/15 | 43°05'N | 131°33'W | 61.0 | 330 | 17 | 59.6 | 57.0 | 1028 | 01 | 6, 8 | 5 | 9 | 2 | 310 | 2 | 32.83 | 0.63 |
| 122 | 2330 | 7/15 | 43°12'N | 131°27'W | 60.5 | 330 | 18 | 60.0 | 58.1 | 1027 | 02 | 6, 8 | 5 | 9 | 3 | 340 | 1 | 32.74 | 0.49 |
| 123 | 0200 | 7/16 | 43°25'N | 131°16'W | 60.5 | 330 | 16 | 59.8 | 58.0 | 1027 | 01 | 6, 8 | 4 | 9 | 3 | 340 | 2 | 32.83 | 0.40 |
| 124 | 0450 | 7/16 | 43°45'N | 130°59'W | 59.8 | 350 | 16 | 59.4 | 58.2 | 1028 | 02 | 6, 8 | 4 | 9 | 3 | XX | X | - | 0.57 |
| 125 | 0600 | 7/16 | 43°45'N | 130°59'W | 59.8 | 350 | 16 | 59.4 | 58.2 | 1028 | 02 | 6, 8 | 4 | 9 | 3 | XX | X | - | - |
| 126 | 0900 | 7/16 | 44°00'N | 130°47'W | 59.6 | 310 | 20 | 58.8 | 56.0 | 1028 | 02 | 6, 8 | 4 | 9 | 3 | XX | X | 32.81 | - |
| 127 | 1200 | 7/16 | 44°16'N | 130°35'W | 58.9 | 350 | 16 | 57.9 | 56.1 | 1028 | 01 | 8 | 3 | 9 | 3 | XX | X | 32.75 | 0.41 |
| 128 | 1400 | 7/16 | 44°28'N | 130°26'W | 59.0 | 350 | 19 | 57.9 | 56.9 | 1028 | 02 | 8 | 3 | 9 | 3 | 350 | 1 | 32.74 | 0.52 |
| 129 | 1630 | 7/16 | 44°38'N | 130°13'W | 58.8 | 350 | 19 | 58.2 | 57.3 | 1029 | 02 | 6, 8 | 5 | 9 | 3 | 360 | 1 | 32.74 | 0.55 |
| 130 | 1830 | 7/16 | 44°46'N | 130°06'W | 58.6 | 360 | 20 | 58.9 | 57.1 | 1029 | 03 | 4, 6, 8 | 7 | 9 | 3 | 360 | 1 | 32.72 | 0.51 |
| 131 | 2100 | 7/16 | 44°56'N | 130°01'W | 58.8 | 000 | 20 | 59.3 | 57.3 | 1030 | 03 | 4, 6, 8 | 6 | 9 | 3 | 300 | 1 | 32.68 | 0.43 |
| 132 | 2330 | 7/16 | 45°02'N | 129°48'W | 58.8 | 290 | 26 | 59.3 | 56.4 | 1029 | 01 | 4, 6, 8 | 5 | 9 | 3 | 300 | 1 | 32.63 | 0.56 |
| 133 | 0200 | 7/17 | 45°06'N | 129°27'W | 59.2 | 340 | 24 | 59.8 | 58.1 | 1028 | 01 | 6, 8 | 6 | 9 | 3 | 340 | 1 | 32.57 | 0.50 |
| 134 | 0500 | 7/17 | 45°11'N | 129°06'W | 60.2 | 320 | 24 | 58.8 | 57.6 | 1029 | 02 | 6, 8 | 6 | 9 | 3 | 340 | 2 | - | 0.45 |
| 135 | 0605 | 7/17 | 45°12'N | 129°03'W | 60.1 | 320 | 24 | 58.8 | 57.6 | 1029 | 02 | 6, 8 | 6 | 9 | 3 | 340 | 2 | - | - |
| 136 | 0900 | 7/17 | 45°17'N | 128°42'W | 60.1 | 350 | 18 | 59.0 | 57.3 | 1028 | 03 | 6, 8 | 7 | 9 | 3 | XX | X | 32.38 | 0.50 |
| 137 | 1200 | 7/17 | 45°21'N | 128°18'W | 61.0 | 350 | 18 | 58.2 | 57.0 | 1027 | 02 | 6, 8 | 8 | 9 | 3 | 350 | 1 | 32.07 | 0.36 |
| 138 | 1400 | 7/17 | 45°27'N | 128°02'W | 61.2 | 350 | 22 | 58.7 | 57.1 | 1026 | 03 | 0, 8 | 8 | 9 | 3 | 350 | 1 | 31.98 | 0.39 |
| 139 | 1630 | 7/17 | 45°33'N | 127°42'W | 61.3 | 320 | 19 | 58.8 | 52.6 | 1026 | 02 | 6, 8 | 8 | 9 | 3 | 350 | 1 | 31.71 | 0.50 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 140 | 1830 | 7/17 | 45°37'N | 127°26'W | 61.3 | 330 | 19 | 59.7 | 56.4 | 1025 | 02 | 6, 8 | 7 | 9 | 3 | 350 | 1 | 31.67 | 0.48 |
| 141 | 2105 | 7/17 | 45°41'N | 127°04'W | 60.9 | 320 | 21 | 59.8 | 56.8 | 1024 | 02 | 6, 8 | 8 | 9 | 3 | 270 | 1 | 31.74 | 0.40 |
| 142 | 2330 | 7/17 | 45°44'N | 126°45'W | 60.1 | 340 | 20 | 60.2 | 57.3 | 1023 | 01 | 6, 8 | 7 | 9 | 4 | 340 | 3 | 32.52 | 0.51 |
| 143 | 0215 | 7/18 | 45°47'N | 126°21'W | 61.2 | 330 | 20 | 60.3 | 55.8 | 1022 | 02 | 6, 8 | 8 | 9 | 4 | 340 | 2 | 32.36 | - |
| 144 | 0445 | 7/18 | 45°54'N | 125°58'W | 61.7 | 340 | 19 | 60.7 | 58.3 | 1021 | 01 | 6, 8 | 4 | 9 | 4 | 320 | 4 | - | 0.47 |
| 145 | 0605 | 7/18 | 45°54'N | 125°57'W | 61.7 | 340 | 19 | 60.7 | 58.3 | 1021 | 01 | 6, 8 | 4 | 9 | 4 | 320 | 4 | - | - |
| 146 | 1205 | 7/18 | 46°16'N | 125°31'W | 60.5 | 320 | 20 | 59.9 | 58.0 | 1019 | 01 | 6, 8 | 3 | 9 | 3 | 320 | 4 | 31.83 | 0.40 |
| 147 | 1405 | 7/18 | 46°15'N | 125°12'W | 60.9 | 320 | 17 | 60.8 | 58.3 | 1019 | 01 | 6, 8 | 2 | 9 | 3 | 320 | 4 | 31.64 | 0.30 |
| 148 | 1630 | 7/18 | 46°14'N | 124°48'W | 60.9 | 010 | 21 | 54.0 | 57.2 | 1018 | 02 | 6, 8 | 2 | 9 | 3 | 320 | 3 | 31.92 | 0.41 |
| 149 | 1330 | 7/22 | 46°54'N | 125°15'W | 58.2 | 320 | 07 | 58.5 | 57.8 | 1017 | 02 | 0 | 8 | 8 | 2 | 320 | 1 | - | 0.52 |
| 150 | 1430 | 7/22 | 46°54'N | 125°15'W | 58.1 | 320 | 07 | 58.5 | 57.8 | 1017 | 02 | 0 | 8 | 8 | 2 | 320 | 1 | - | - |
| 151 | 1630 | 7/22 | 46°59'N | 125°34'W | 60.9 | 300 | 04 | 60.6 | 59.8 | 1017 | 02 | 0, 6 | 8 | 8 | 2 | 300 | 1 | 31.40 | 0.34 |
| 152 | 1830 | 7/22 | 46°59'N | 125°53'W | 61.1 | 210 | 06 | 59.4 | 56.2 | 1017 | 02 | 0, 6 | 8 | 8 | 2 | 330 | 1 | 31.24 | 0.27 |
| 153 | 2115 | 7/22 | 47°01'N | 126°18'W | 61.5 | 230 | 14 | 62.2 | 61.2 | 1017 | 02 | 0, 8, 6 | 6 | 9 | 2 | 310 | 1 | 30.97 | 0.10 |
| 154 | 2330 | 7/22 | 47°01'N | 126°32'W | 61.8 | 250 | 13 | 62.8 | 60.3 | 1017 | 02 | 0, 8, 6 | 6 | 9 | 2 | 310 | 1 | 31.15 | 0.30 |
| 155 | 0120 | 7/23 | 47°02'N | 126°41'W | 61.8 | 260 | 15 | 62.5 | 60.0 | 1017 | 01 | 8, 6 | 4 | 9 | 2 | 280 | 1 | 31.40 | - |
| 156 | 0217 | 7/23 | 47°02'N | 126°48'W | 61.8 | 260 | 15 | 62.2 | 60.1 | 1017 | 03 | 8, 6 | 7 | 9 | 2 | 280 | 1 | 31.65 | 0.41 |
| 157 | 0450 | 7/23 | 47°02'N | 127°08'W | 61.2 | 280 | 10 | 60.5 | 57.2 | 1019 | 02 | X | X | 8 | 2 | 280 | 1 | - | - |
| 158 | 0630 | 7/23 | 47°02'N | 127°12'W | 60.9 | 260 | 16 | 62.3 | 58.6 | 1020 | 02 | X | X | 9 | 2 | XX | X | - | 0.40 |
| 159 | 1240 | 7/23 | 47°00'N | 127°04'W | 60.9 | 280 | 05 | 60.2 | 59.1 | 1023 | 60 | 0, 1, 6 | 6 | 9 | 2 | 280 | 1 | 30.81 | 0.30 |
| 160 | 1515 | 7/23 | 47°00'N | 127°18'W | 61.0 | 280 | 05 | 59.5 | 59.0 | 1024 | 01 | 6, 8 | 5 | 9 | 2 | 280 | 1 | 31.38 | 0.30 |
| 161 | 1830 | 7/23 | 47°00'N | 127°24'W | 61.2 | 270 | 09 | 62.0 | 58.8 | 1025 | 01 | 6, 8 | 3 | 9 | 2 | 270 | 1 | 31.44 | 0.30 |
| 162 | 1950 | 7/23 | 47°01'N | 127°47'W | 61.2 | 270 | 05 | 62.0 | 58.6 | 1025 | 01 | 6, 8 | 3 | 9 | 2 | 270 | 1 | 31.71 | 0.33 |
| 163 | 2130 | 7/23 | 47°00'N | 127°59'W | 59.8 | 270 | 10 | 62.8 | 60.9 | 1026 | 02 | 6, 8 | 3 | 9 | 1 | 240 | 1 | 32.38 | 0.50 |
| 164 | 2330 | 7/23 | 47°00'N | 128°13'W | 60.3 | 270 | 07 | 61.7 | 60.2 | 1026 | 01 | 6, 8 | 2 | 9 | 1 | 250 | 2 | 32.45 | 0.43 |
| 165 | 0210 | 7/24 | 47°00'N | 128°39'W | 59.7 | 270 | 08 | 61.2 | 59.2 | 1025 | 03 | 6, 8 | 7 | 9 | 1 | 270 | 2 | 32.50 | 0.52 |
| 166 | 0455 | 7/24 | 47°00'N | 129°08'W | 59.2 | 270 | 06 | 59.0 | 58.5 | 1025 | 02 | 0, 5 | 7 | 9 | 1 | 270 | 2 | - | - |
| 167 | 0600 | 7/24 | 47°00'N | 129°08'W | 59.2 | 260 | 07 | 59.8 | 58.1 | 1026 | 02 | 0, 5 | 7 | 9 | 1 | 270 | 2 | - | 0.44 |
| 168 | 1245 | 7/24 | 47°01'N | 129°10'W | 58.8 | 270 | 07 | 59.0 | 56.8 | 1025 | 01 | 6 | 3 | 9 | 1 | 270 | 2 | 32.18 | 0.43 |
| 169 | 1400 | 7/24 | 47°00'N | 129°21'W | 58.7 | 270 | 09 | 59.7 | 57.0 | 1025 | 01 | 6 | 2 | 9 | 1 | 270 | 2 | 32.34 | 0.44 |
| 170 | 1630 | 7/24 | 46°55'N | 129°43'W | 58.7 | 260 | 10 | 59.1 | 57.9 | 1025 | 03 | 0, 6 | 8 | 9 | 1 | 290 | 2 | 32.34 | 0.54 |
| 171 | 1830 | 7/24 | 46°51'N | 130°01'W | 58.7 | 250 | 10 | 60.3 | 59.7 | 1025 | 02 | 0, 6 | 8 | 9 | 1 | 290 | 4 | 32.41 | - |
| 172 | 2100 | 7/24 | 46°47'N | 130°22'W | 59.1 | 240 | 11 | 60.4 | 59.3 | 1025 | 03 | 0, 3 | 4 | 9 | 1 | 280 | 2 | 32.50 | 0.35 |
| 173 | 2330 | 7/24 | 46°44'N | 130°38'W | 59.0 | 240 | 12 | 60.0 | 58.5 | 1024 | 02 | 4, 8 | 8 | 9 | 2 | 280 | 2 | 32.50 | 0.52 |
| 174 | 0050 | 7/25 | 46°43'N | 130°49'W | 59.1 | 240 | 06 | 61.5 | 61.0 | 1023 | 02 | 4 | 8 | 9 | 2 | XX | X | 32.54 | 0.59 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 175 | 0055 | 7/25 | 46°43'N | 130°49'W | 59.1 | 240 | 06 | 61.5 | 61.0 | 1023 | 02 | 4 | 8 | 9 | 2 | XX | X | - | - |
| 176 | 0300 | 7/25 | 46°44'N | 130°55'W | 59.0 | 220 | 13 | 60.2 | 59.0 | 1021 | 02 | 0,8 | 7 | 9 | 2 | 260 | 2 | 32.48 | 0.50 |
| 177 | 0425 | 7/25 | 46°45'N | 131°04'W | 58.9 | 220 | 14 | 59.6 | 59.0 | 1021 | 02 | 1,2 | 8 | 9 | 2 | 260 | 2 | - | 0.47 |
| 178 | 0535 | 7/25 | 46°45'N | 131°04'W | 59.0 | 200 | 13 | 61.8 | 60.2 | 1020 | 02 | X | X | 9 | 2 | XX | X | - | - |
| 179 | 1300 | 7/25 | 46°46'N | 131°01'W | 58.7 | 280 | 19 | 59.1 | 58.3 | 1018 | 02 | 0,6,8 | 4 | 9 | 3 | 280 | 1 | 32.48 | 0.50 |
| 180 | 1445 | 7/25 | 46°46'N | 131°14'W | 58.7 | 330 | 18 | 58.0 | 57.1 | 1019 | 03 | 0,6,8 | 6 | 9 | 4 | 280 | 3 | 32.52 | 0.52 |
| 181 | 1630 | 7/25 | 46°46'N | 131°28'W | 58.3 | 300 | 20 | 59.2 | 56.5 | 1020 | 03 | 6,4,8 | 6 | 9 | 4 | 280 | 3 | 32.48 | 0.47 |
| 182 | 1830 | 7/25 | 46°47'N | 131°45'W | 58.1 | 300 | 20 | 59.9 | 57.0 | 1021 | 02 | 4,6,8 | 8 | 9 | 3 | 280 | 3 | 32.47 | 0.51 |
| 183 | 2105 | 7/25 | 46°48'N | 132°07'W | 58.2 | 290 | 17 | 59.6 | 57.9 | 1022 | 01 | 4,8 | 2 | 9 | 3 | 280 | 3 | 32.52 | 0.58 |
| 184 | 2330 | 7/25 | 46°50'N | 132°27'W | 58.5 | 280 | 26 | 59.8 | 56.2 | 1022 | 03 | 6,8 | 6 | 9 | 3 | 280 | 3 | 32.57 | 0.61 |
| 185 | 0200 | 7/26 | 46°52'N | 132°51'W | 57.9 | 280 | 24 | 58.2 | 56.0 | 1023 | 02 | 0,1,4,8 | 7 | 9 | 3 | 280 | 3 | 32.54 | 0.60 |
| 186 | 0530 | 7/26 | 46°55'N | 133°23'W | 57.7 | 280 | 10 | 57.8 | 55.0 | 1026 | 02 | 0,1,4,8 | 5 | 9 | 3 | 280 | 3 | 32.54 | 0.52 |
| 187 | 0800 | 7/26 | 46°56'N | 133°37'W | 57.4 | 280 | 09 | 58.0 | 54.8 | 1022 | 00 | X | X | 9 | 3 | XX | X | 32.52 | 0.61 |
| 188 | 1000 | 7/26 | 46°56'N | 133°50'W | 57.4 | 280 | 14 | 57.0 | 56.4 | 1022 | 00 | X | X | 9 | 3 | XX | X | 32.52 | 0.60 |
| 189 | 1200 | 7/26 | 46°58'N | 134°02'W | 57.3 | 260 | 20 | 55.0 | 54.2 | 1022 | 00 | X | X | 9 | 3 | XX | X | - | 0.51 |
| 190 | 1315 | 7/26 | 46°57'N | 134°02'W | 57.3 | 260 | 20 | 55.0 | 54.2 | 1022 | 63 | 0,6 | 8 | 9 | 3 | XX | X | - | - |
| 191 | 1630 | 7/26 | 46°48'N | 133°34'W | 57.8 | 130 | 27 | 59.2 | 59.0 | 1019 | 63 | 0,6 | 8 | 8 | 3 | 050 | 3 | 32.59 | 0.50 |
| 192 | 1830 | 7/26 | 46°42'N | 133°17'W | 57.9 | 210 | 18 | 60.0 | 59.5 | 1019 | 63 | 0,6,8 | 8 | 8 | 3 | 230 | 3 | 32.56 | - |
| 193 | 2100 | 7/26 | 46°34'N | 132°55'W | 58.9 | 210 | 17 | 61.6 | 61.0 | 1018 | 53 | 0 | 8 | 5 | 4 | 240 | 3 | 32.54 | 0.44 |
| 194 | 2330 | 7/26 | 46°25'N | 132°31'W | 59.4 | 240 | 28 | 62.1 | 62.1 | 1018 | 52 | 0 | 8 | 5 | 4 | 250 | 3 | - | - |
| 195 | 0230 | 7/27 | 46°16'N | 132°04'W | 58.3 | 250 | 20 | 60.4 | 60.4 | 1017 | 52 | 0 | 8 | 5 | 4 | 250 | 3 | 32.61 | 0.64 |
| 196 | 0455 | 7/27 | 46°06'N | 131°43'W | 58.3 | 250 | 20 | 60.2 | 60.2 | 1017 | 53 | X | X | 5 | 4 | 250 | 4 | - | 0.57 |
| 197 | 0630 | 7/27 | 46°06'N | 131°43'W | 58.3 | 250 | 20 | 60.2 | 60.6 | 1017 | 53 | X | X | 5 | 4 | 250 | 4 | - | - |
| 198 | 1400 | 7/27 | 46°10'N | 131°19'W | 58.8 | 300 | 16 | 61.0 | 61.0 | 1017 | 02 | 0 | 8 | 5 | 3 | 250 | 4 | 32.52 | 0.68 |
| 199 | 1640 | 7/27 | 46°09'N | 130°51'W | 59.2 | 250 | 14 | 60.0 | 60.0 | 1018 | 02 | 0 | 8 | 5 | 4 | 260 | 4 | - | - |
| 200 | 1830 | 7/27 | 46°08'N | 130°30'W | 59.0 | 250 | 16 | 61.8 | 60.5 | 1018 | 01 | 0 | 7 | 7 | 3 | 270 | 5 | 32.48 | 0.56 |
| 201 | 2100 | 7/27 | 46°06'N | 130°04'W | 59.5 | 220 | 16 | 63.0 | 61.0 | 1019 | 02 | 0,5 | 1 | 7 | 3 | 230 | 3 | 32.57 | 0.69 |
| 202 | 2312 | 7/27 | 46°05'N | 129°48'W | 60.3 | 220 | 14 | 63.8 | 63.2 | 1019 | 03 | X | 8 | 7 | 3 | 230 | 3 | 32.61 | 0.56 |
| 203 | 0215 | 7/28 | 46°02'N | 129°22'W | 60.8 | 200 | 12 | 62.7 | 62.7 | 1018 | 02 | 0 | 8 | 7 | 3 | 230 | 3 | 32.54 | 0.50 |
| 204 | 0450 | 7/28 | 46°01'N | 128°55'W | 60.4 | 220 | 18 | 62.0 | 62.0 | 1019 | 45 | 0 | 8 | 5 | 3 | 250 | 3 | 32.52 | 0.68 |
| 205 | 0700 | 7/28 | 46°01'N | 128°55'W | 60.5 | 230 | 20 | 61.2 | 60.8 | 1018 | 45 | X | X | 5 | 3 | XX | X | - | - |
| 206 | 1400 | 7/28 | 46°02'N | 128°39'W | 60.3 | 220 | 19 | 62.1 | 61.2 | 1015 | 53 | 0 | 8 | 5 | 4 | 240 | 4 | 32.52 | 0.51 |
| 207 | 1630 | 7/28 | 46°01'N | 128°14'W | 60.4 | 230 | 16 | 62.0 | 60.8 | 1016 | 53 | 0 | 8 | 5 | 4 | 270 | 4 | 32.57 | 0.35 |
| 208 | 1830 | 7/28 | 46°01'N | 127°54'W | 61.0 | 200 | 18 | 63.0 | 63.0 | 1016 | 51 | 0 | 8 | 6 | 3 | 260 | 2 | 32.50 | 0.55 |
| 209 | 2105 | 7/28 | 45°58'N | 127°29'W | 61.5 | 230 | 17 | 65.8 | 64.0 | 1016 | 40 | 0 | 8 | 7 | 3 | 260 | 2 | 32.43 | 0.51 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 210 | 2335 | 7/28 | 45°45'N | 127°19'W | 62.5 | 240 | 11 | 63.2 | 63.2 | 1016 | 40 | 0 | 8 | 6 | 3 | 260 | 2 | 32.41 | 0.54 |
| 211 | 0200 | 7/29 | 45°29'N | 127°06'W | 62.5 | 330 | 12 | 64.0 | 64.0 | 1017 | 47 | 0 | 8 | 4 | 3 | 260 | 2 | 32.30 | - |
| 212 | 0435 | 7/29 | 45°15'N | 126°53'W | 63.2 | 330 | 10 | 62.0 | 62.0 | 1017 | 20 | 0 | 8 | 7 | 2 | 260 | 2 | - | 0.57 |
| 213 | 0540 | 7/29 | 45°15'N | 126°53'W | 63.2 | 330 | 10 | 62.0 | 62.0 | 1017 | 20 | 0 | 8 | 7 | 2 | 260 | 2 | - | - |
| 214 | 1400 | 7/29 | 45°00'N | 126°32'W | 62.5 | 350 | 09 | 61.0 | 59.5 | 1018 | 02 | 6,8 | 8 | 9 | 2 | 260 | 2 | 31.71 | 0.42 |
| 215 | 1630 | 7/29 | 44°46'N | 126°19'W | 64.1 | 010 | 14 | 63.0 | 61.6 | 1018 | 01 | 6,8 | 3 | 9 | 2 | 260 | 2 | 30.21 | 0.33 |
| 216 | 1830 | 7/29 | 44°34'N | 126°08'W | 64.6 | 350 | 15 | 63.4 | 62.0 | 1018 | 03 | 6,8 | 5 | 9 | 2 | 260 | 2 | 30.19 | 0.40 |
| 217 | 2105 | 7/29 | 44°20'N | 125°54'W | 64.4 | 320 | 11 | 64.3 | 61.8 | 1019 | 03 | 6,8 | 6 | 9 | 2 | 290 | 1 | 30.28 | 0.40 |
| 218 | 2335 | 7/29 | 44°13'N | 125°47'W | 64.4 | 340 | 15 | 64.3 | 60.3 | 1018 | 03 | 6 | 7 | 9 | 3 | 280 | 1 | 30.84 | 0.42 |
| 219 | 0200 | 7/30 | 44°05'N | 125°27'W | 61.6 | 330 | 14 | 63.8 | 60.2 | 1018 | 03 | 6,8 | 7 | 9 | 2 | 280 | 1 | 30.62 | 0.48 |
| 220 | 0420 | 7/30 | 44°00'N | 125°07'W | 60.8 | 330 | 17 | 62.6 | 61.0 | 1018 | 02 | 6,8 | 7 | 9 | 2 | 280 | 1 | - | 0.64 |
| 221 | 0525 | 7/30 | 44°00'N | 125°07'W | 60.0 | 330 | 17 | 62.6 | 62.0 | 1018 | 02 | X | X | 9 | 2 | XX | X | - | - |
| 222 | 0810 | 7/30 | 43°49'N | 124°53'W | 60.6 | 340 | 14 | 61.3 | 60.2 | 1018 | 02 | X | X | 9 | 2 | XX | X | 32.12 | 0.52 |
| 223 | 1400 | 7/30 | 43°43'N | 124°58'W | 60.9 | 010 | 10 | 63.4 | 61.8 | 1018 | 01 | 8 | 3 | 9 | 2 | 280 | 1 | 32.05 | 0.41 |
| 224 | 1640 | 7/30 | 43°34'N | 125°20'W | 61.0 | 350 | 08 | 66.2 | 63.9 | 1019 | 02 | 5,8 | 2 | 9 | 2 | 290 | 2 | 32.00 | 0.30 |
| 225 | 1805 | 7/30 | 43°29'N | 125°33'W | 59.3 | 350 | 08 | 67.1 | 63.8 | 1020 | 01 | 5,8 | 1 | 9 | 2 | 290 | 2 | 32.47 | - |
| 226 | 1825 | 7/30 | 43°27'N | 125°38'W | 60.0 | 350 | 08 | 67.1 | 63.8 | 1020 | 01 | 5,8 | 1 | 9 | 2 | 290 | 2 | - | 0.30 |
| 227 | 2100 | 7/30 | 43°18'N | 126°00'W | 62.4 | 350 | 08 | 65.4 | 62.7 | 1021 | 02 | 5,8 | 1 | 9 | 2 | 290 | 2 | - | 0.29 |
| 228 | 2330 | 7/30 | 43°12'N | 126°16'W | 64.3 | 330 | 12 | 65.1 | 62.5 | 1021 | 03 | 8 | 4 | 9 | 2 | 330 | 2 | - | 0.40 |
| 229 | 0210 | 7/31 | 43°05'N | 126°37'W | 64.2 | 340 | 09 | 64.0 | 61.2 | 1021 | 01 | 8 | 3 | 9 | 2 | 310 | 3 | - | 0.32 |
| 230 | 0435 | 7/31 | 42°56'N | 126°59'W | 64.0 | 330 | 14 | 62.9 | 60.7 | 1021 | 02 | 8 | 2 | 9 | 2 | 310 | 2 | 32.07 | 0.44 |
| 231 | 0625 | 7/31 | 42°56'N | 126°59'W | 64.0 | 330 | 10 | 62.9 | 60.7 | 1021 | 02 | X | X | 9 | 2 | XX | X | 32.07 | - |
| 232 | 1440 | 7/31 | 42°46'N | 127°18'W | 63.6 | 320 | 16 | 62.3 | 59.1 | 1022 | 03 | 8 | 6 | 9 | 2 | 310 | 1 | - | - |
| 233 | 1630 | 7/31 | 42°42'N | 127°31'W | 63.4 | 340 | 18 | 63.0 | 61.0 | 1023 | 02 | 8 | 6 | 9 | 2 | 340 | 1 | 32.19 | 0.50 |
| 234 | 1830 | 7/31 | 42°37'N | 127°46'W | 63.5 | 350 | 18 | 66.3 | 62.9 | 1024 | 02 | 4,8 | 6 | 9 | 2 | 340 | 1 | 32.14 | 0.41 |
| 235 | 2100 | 7/31 | 42°32'N | 128°05'W | 63.2 | 350 | 18 | 65.2 | 61.6 | 1024 | 01 | 4,8 | 7 | 9 | 2 | 340 | 1 | 32.16 | 0.56 |
| 236 | 2330 | 7/31 | 42°28'N | 128°22'W | 63.6 | 340 | 14 | 64.7 | 62.5 | 1025 | 03 | 4,8 | 2 | 9 | 2 | 340 | 1 | 32.42 | 0.48 |
| 237 | 0200 | 8/1 | 42°23'N | 128°44'W | 63.0 | 360 | 17 | 63.3 | 61.9 | 1025 | 02 | 8 | 5 | 9 | 2 | 350 | 1 | 32.78 | 0.58 |
| 238 | 0430 | 8/1 | 42°17'N | 129°05'W | 62.6 | 360 | 17 | 62.5 | 61.0 | 1026 | 02 | 8 | 5 | 9 | 2 | 350 | 1 | 32.86 | 0.69 |
| 239 | 0630 | 8/1 | 42°16'N | 129°05'W | 62.5 | 350 | 16 | 62.5 | 61.0 | 1026 | 02 | X | X | 9 | 2 | XX | X | 32.86 | - |
| 240 | 1400 | 8/1 | 42°07'N | 129°17'W | 62.2 | 010 | 15 | 61.2 | 60.0 | 1027 | 03 | 6,8 | 7 | 9 | 2 | 020 | 1 | 32.77 | 0.55 |
| 241 | 1630 | 8/1 | 42°00'N | 129°37'W | 62.7 | 340 | 14 | 63.1 | 61.8 | 1027 | 02 | 6,8 | 8 | 9 | 2 | 020 | 1 | 32.86 | 0.54 |
| 242 | 1830 | 8/1 | 41°55'N | 129°53'W | 62.7 | 350 | 15 | 63.8 | 61.8 | 1027 | 02 | 6,8 | 6 | 9 | 2 | 020 | 1 | 32.91 | 0.45 |
| 243 | 2105 | 8/1 | 41°48'N | 130°13'W | 63.3 | 350 | 18 | 65.7 | 63.0 | 1028 | 01 | 8 | 2 | 9 | 2 | 010 | 1 | 32.86 | 0.57 |
| 244 | 2340 | 8/1 | 41°44'N | 130°28'W | 63.4 | 360 | 13 | 64.8 | 60.2 | 1027 | 02 | 8 | 2 | 9 | 2 | 010 | 1 | 32.88 | 0.52 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 245 | 0200 | 8/2 | 41°38'N | 130°47'W | 63.6 | 340 | 14 | 63.6 | 60.8 | 1027 | 02 | 8 | 4 | 9 | 2 | 010 | 1 | 32.94 | 0.48 |
| 246 | 0435 | 8/2 | 41°33'N | 131°06'W | 63.2 | 330 | 10 | 62.8 | 60.2 | 1027 | 02 | 8 | 5 | 9 | 2 | 010 | 1 | 32.74 | - |
| 247 | 0600 | 8/2 | 41°33'N | 131°06'W | 63.0 | 340 | 11 | 62.8 | 60.2 | 1028 | 02 | X | X | 9 | 2 | XX | 1 | 32.74 | 0.57 |
| 248 | 0805 | 8/2 | 41°33'N | 130°47'W | 62.9 | 330 | 13 | 61.2 | 59.2 | 1027 | 02 | X | X | 9 | 2 | XX | X | 32.86 | 0.42 |
| 249 | 1400 | 8/2 | 41°31'N | 130°34'W | 62.5 | 000 | 09 | 61.8 | 60.4 | 1025 | 02 | 8 | 2 | 9 | 2 | 010 | 2 | 32.93 | 0.51 |
| 250 | 1635 | 8/2 | 41°29'N | 130°09'W | 62.6 | 330 | 11 | 62.2 | 60.3 | 1025 | 03 | 8 | 3 | 9 | 2 | 360 | 1 | 32.88 | 0.63 |
| 251 | 1840 | 8/2 | 41°28'N | 129°49'W | 62.8 | 320 | 10 | 63.3 | 60.8 | 1025 | 02 | 8 | 3 | 9 | 1 | 020 | 1 | 32.86 | 0.49 |
| 252 | 2100 | 8/2 | 41°26'N | 129°26'W | 63.3 | 330 | 07 | 63.0 | 61.2 | 1024 | 02 | 1,8 | 2 | 9 | 1 | 020 | 1 | 32.93 | 0.44 |
| 253 | 2330 | 8/2 | 41°24'N | 129°09'W | 63.8 | 280 | 14 | 63.9 | 61.0 | 1017 | 03 | 1,8 | 3 | 9 | 1 | 010 | 1 | 32.84 | 0.49 |
| 254 | 0205 | 8/3 | 41°21'N | 128°48'W | 63.3 | 270 | 16 | 63.6 | 62.1 | 1022 | 03 | 0 | 8 | 9 | 1 | 010 | 1 | 32.90 | 0.46 |
| 255 | 0425 | 8/3 | 41°18'N | 128°25'W | 63.0 | 280 | 12 | 63.0 | 61.9 | 1021 | 02 | 0 | 8 | 9 | 1 | 340 | 1 | 32.86 | 0.55 |
| 256 | 0530 | 8/3 | 41°18'N | 128°25'W | 62.8 | 270 | 12 | 62.8 | 61.3 | 1021 | 02 | X | X | 9 | 2 | 300 | 1 | 32.86 | - |
| 257 | 1400 | 8/3 | 41°14'N | 127°53'W | 62.7 | 240 | 13 | 66.3 | 66.3 | 1015 | 55 | X | X | 5 | 2 | 240 | 2 | 32.85 | 0.49 |
| 258 | 1630 | 8/3 | 41°11'N | 127°31'W | 62.7 | 290 | 16 | 64.3 | 62.9 | 1016 | 01 | 1,8 | 6 | 9 | 2 | 260 | 2 | 32.75 | 0.51 |
| 259 | 1830 | 8/3 | 41°08'N | 127°13'W | 62.6 | 290 | 19 | 64.0 | 62.1 | 1016 | 01 | 0,8 | 6 | 9 | 3 | 260 | 2 | 32.53 | 0.40 |
| 260 | 2044 | 8/3 | 41°03'N | 126°52'W | 59.6 | 290 | 15 | 64.5 | 63.8 | 1015 | 02 | 0,8 | 6 | 9 | 2 | 260 | 2 | 32.60 | 0.52 |
| 261 | 2120 | 8/3 | 41°04'N | 126°56'W | 61.8 | 280 | 12 | 65.2 | 63.7 | 1015 | 02 | 0,8 | 6 | 9 | 2 | 260 | 2 | 32.76 | 0.68 |
| 262 | 0040 | 8/4 | 41°02'N | 126°41'W | 60.0 | 240 | 10 | 63.5 | 62.9 | 1015 | 02 | 0,8 | 6 | 9 | 3 | 280 | 2 | 32.79 | - |
| 263 | 0145 | 8/4 | 41°02'N | 126°39'W | 61.0 | 280 | 09 | 65.7 | 64.3 | 1014 | 02 | 0,8 | 6 | 9 | 3 | 280 | 2 | 32.79 | 0.57 |
| 264 | 0530 | 8/4 | 40°58'N | 126°01'W | 60.3 | 240 | 10 | 64.9 | 63.3 | 1014 | 01 | 0,8 | 4 | 9 | 2 | XX | X | - | 0.51 |
| 265 | 1415 | 8/4 | 40°47'N | 125°33'W | 60.3 | 220 | 10 | 62.0 | 59.1 | 1013 | 01 | 4 | 1 | 9 | 2 | 280 | 2 | 32.12 | 0.54 |
| 266 | 1506 | 8/4 | 40°47'N | 125°24'W | 57.7 | 220 | 10 | 60.6 | 58.2 | 1014 | 00 | 4 | 1 | 9 | 2 | 280 | 2 | 32.62 | 0.63 |
| 267 | 1620 | 8/4 | 40°48'N | 125°15'W | 54.9 | 180 | 12 | 58.8 | 56.3 | 1014 | 03 | 4 | 6 | 9 | 2 | 280 | 2 | - | 1.32 |
| 268 | 1735 | 8/4 | 40°48'N | 125°02'W | 54.1 | 160 | 13 | 60.8 | 57.3 | 1014 | 02 | 4,8 | 6 | 9 | 2 | 290 | 2 | 33.04 | 0.86 |
| 269 | 1835 | 8/4 | 40°48'N | 125°01'W | 54.2 | 160 | 11 | 60.8 | 57.3 | 1014 | 02 | 4,8 | 6 | 9 | 2 | 290 | 2 | 33.04 | - |
| 270 | 2105 | 8/4 | 40°41'N | 125°16'W | 54.7 | 190 | 13 | 61.1 | 57.5 | 1015 | 18 | 8 | 8 | 9 | 2 | 290 | 4 | 32.90 | 0.70 |
| 271 | 2220 | 8/4 | 40°38'N | 125°25'W | 56.3 | 200 | 13 | 59.9 | 58.7 | 1015 | 18 | 5,8 | 6 | 9 | 3 | 270 | 4 | 32.84 | 0.70 |
| 272 | 2350 | 8/4 | 40°35'N | 125°34'W | 60.4 | 200 | 13 | 61.4 | 59.8 | 1014 | 01 | 5,8 | 2 | 9 | 3 | 270 | 4 | - | - |
| 273 | 0210 | 8/5 | 40°31'N | 125°51'W | 60.3 | 230 | 12 | 60.3 | 59.8 | 1014 | 02 | 5,8 | 3 | 9 | 3 | 270 | 4 | 32.68 | 0.55 |
| 274 | 0545 | 8/5 | 40°26'N | 126°16'W | 59.7 | 220 | 12 | 61.3 | 60.1 | 1015 | 00 | X | X | 9 | 3 | XX | X | 32.64 | 0.63 |
| 275 | 1410 | 8/5 | 40°23'N | 126°30'W | 57.6 | 310 | 08 | 64.2 | 63.0 | 1015 | 02 | 5,8 | 7 | 9 | 3 | 270 | 4 | 32.64 | - |
| 276 | 1645 | 8/5 | 40°18'N | 126°54'W | 59.3 | 300 | 11 | 60.9 | 59.6 | 1017 | 01 | 0,5,8 | 5 | 9 | 2 | 290 | 3 | 33.03 | 0.67 |
| 277 | 1745 | 8/5 | 40°18'N | 126°54'W | 59.6 | 300 | 13 | 60.9 | 59.6 | 1017 | 01 | 0,5,8 | 5 | 9 | 2 | 290 | 3 | 33.03 | - |
| 278 | 1920 | 8/5 | 40°15'N | 127°09'W | 58.3 | 280 | 11 | 63.7 | 61.0 | 1017 | 02 | 0,5,8 | 6 | 9 | 3 | 320 | 3 | 32.94 | 0.39 |
| 279 | 2100 | 8/5 | 40°12'N | 127°23'W | 62.4 | 290 | 15 | 66.5 | 62.1 | 1018 | 03 | 5,8 | 6 | 9 | 3 | 280 | 3 | 32.68 | 0.49 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 280 | 2330 | 8/5 | 40°07'N | 127°38'W | 63.1 | 310 | 15 | 64.9 | 60.9 | 1018 | 03 | 4,5,8 | 7 | 9 | 4 | 290 | 3 | 32.66 | 0.34 |
| 281 | 0210 | 8/6 | 40°03'N | 127°57'W | 62.7 | 300 | 18 | 63.5 | 60.7 | 1019 | 03 | 6 | 8 | 9 | 4 | 290 | 3 | 32.74 | 0.42 |
| 282 | 0425 | 8/6 | 40°01'N | 128°16'W | 63.0 | 320 | 14 | 62.3 | 59.2 | 1019 | 02 | 5,6 | 8 | 9 | 4 | 290 | 3 | 32.84 | - |
| 283 | 0925 | 8/6 | 40°16'N | 128°32'W | 63.0 | 080 | 15 | 63.7 | 60.7 | 1019 | 00 | X | X | 9 | 3 | XX | X | 32.84 | - |
| 284 | 1310 | 8/6 | 39°55'N | 128°34'W | 63.3 | 240 | 10 | 62.4 | 60.7 | 1018 | 50 | 0 | 8 | 8 | 2 | 280 | 4 | 32.83 | - |
| 285 | 1600 | 8/6 | 39°51'N | 128°57'W | 63.1 | 270 | 06 | 63.8 | 62.7 | 1019 | 01 | 0,5,6,8 | 7 | 9 | 2 | 310 | 4 | 32.84 | 0.56 |
| 286 | 1705 | 8/6 | 39°51'N | 128°57'W | 63.2 | 270 | 06 | 63.8 | 62.7 | 1019 | 01 | 0,5,6,8 | 7 | 9 | 2 | 310 | 4 | 32.84 | - |
| 287 | 1900 | 8/6 | 39°48'N | 129°13'W | 63.5 | 270 | 10 | 64.2 | 62.9 | 1019 | 15 | 0,8 | 7 | 6 | 3 | 280 | 1 | 32.83 | 0.59 |
| 288 | 2100 | 8/6 | 39°45'N | 129°29'W | 63.5 | 300 | 11 | 66.6 | 63.2 | 1019 | 15 | 0,8 | 7 | 6 | 3 | 280 | 1 | 32.87 | 0.55 |
| 289 | 2330 | 8/6 | 39°41'N | 129°47'W | 63.8 | 300 | 15 | 67.8 | 63.4 | 1019 | 02 | 0,8 | 7 | 6 | 3 | 280 | 1 | 32.92 | 0.55 |
| 290 | 0200 | 8/7 | 39°37'N | 130°10'W | 63.6 | 300 | 13 | 65.0 | 61.6 | 1019 | 02 | 6 | 8 | 9 | 3 | 310 | 1 | 32.91 | 0.56 |
| 291 | 0430 | 8/7 | 39°33'N | 130°33'W | 64.4 | 300 | 15 | 65.0 | 63.4 | 1019 | XX | X | X | 8 | 3 | XX | X | 32.98 | 0.58 |
| 292 | 0725 | 8/7 | 39°30'N | 131°01'W | 64.6 | 300 | 15 | 64.2 | 61.4 | 1020 | XX | X | X | 8 | 3 | XX | X | 32.93 | 0.52 |
| 293 | 1210 | 8/7 | 39°29'N | 130°58'W | 63.9 | 300 | 14 | 62.6 | 60.2 | 1019 | 00 | X | X | 7 | 3 | XX | X | 32.95 | 0.45 |
| 294 | 1310 | 8/7 | 39°29'N | 130°58'W | 63.8 | 300 | 14 | 62.6 | 60.2 | 1019 | 00 | X | X | 7 | 3 | XX | X | 32.95 | - |
| 295 | 1600 | 8/7 | 39°25'N | 130°31'W | 63.6 | 300 | 15 | 64.6 | 63.3 | 1020 | 02 | 0,8 | 8 | 8 | 3 | 330 | 2 | 32.93 | 0.61 |
| 296 | 1830 | 8/7 | 39°21'N | 130°08'W | 63.9 | 300 | 11 | 65.8 | 62.7 | 1020 | 02 | 0,8 | 8 | 8 | 3 | 330 | 2 | 33.00 | 0.55 |
| 297 | 2105 | 8/7 | 39°17'N | 129°45'W | 64.0 | 180 | 04 | 69.4 | 67.2 | 1020 | 18 | 0,8 | 8 | 8 | 3 | 330 | 2 | 33.00 | - |
| 298 | 2330 | 8/7 | 39°14'N | 129°26'W | 64.0 | 350 | 04 | 67.1 | 64.2 | 1020 | 01 | ?,8 | 5 | 9 | 2 | 290 | 1 | 32.95 | 0.55 |
| 299 | 0205 | 8/8 | 39°11'N | 129°04'W | 64.2 | 340 | 12 | 68.8 | 65.3 | 1019 | 01 | 2,8 | 6 | 9 | 2 | 290 | 1 | 32.99 | 0.59 |
| 300 | 0425 | 8/8 | 39°08'N | 128°40'W | 63.9 | 310 | 14 | 64.3 | 62.5 | 1020 | 00 | X | X | 9 | 2 | 290 | 1 | 32.92 | 0.57 |
| 301 | 0520 | 8/8 | 39°08'N | 128°40'W | 63.9 | 310 | 14 | 64.3 | 62.5 | 1020 | 00 | X | X | 9 | 2 | 290 | 1 | 32.92 | - |
| 302 | 1400 | 8/8 | 39°02'N | 128°21'W | 63.5 | 350 | 13 | 63.6 | 61.4 | 1021 | 03 | 2,8 | 7 | 9 | 2 | 330 | 1 | 32.95 | 0.59 |
| 303 | 1645 | 8/8 | 39°00'N | 128°01'W | 63.6 | 010 | 13 | 63.2 | 61.3 | 1022 | 51 | 0,6,8 | 7 | 9 | 2 | 340 | 2 | 32.96 | 0.56 |
| 304 | 1830 | 8/8 | 38°59'N | 127°55'W | 63.7 | 330 | 10 | 63.7 | 62.0 | 1022 | 02 | 6,8 | 7 | 9 | 2 | 320 | 1 | 33.02 | 0.56 |
| 305 | 2112 | 8/8 | 39°00'N | 127°36'W | 63.8 | 330 | 08 | 67.8 | 64.3 | 1022 | 02 | 4,6,8 | 7 | 9 | 2 | 320 | 1 | 32.93 | 0.56 |
| 306 | 2230 | 8/8 | 39°00'N | 127°33'W | 64.2 | 310 | 06 | 67.0 | 59.3 | 1021 | 01 | 5,8 | 6 | 9 | 2 | 270 | 2 | 32.99 | NS |
| 307 | 2330 | 8/8 | 39°00'N | 127°33'W | 64.0 | 310 | 06 | 67.0 | 59.3 | 1021 | 01 | 5,8 | 6 | 9 | 2 | 270 | 2 | 32.99 | - |
| 308 | 0200 | 8/9 | 39°03'N | 127°17'W | 63.7 | 000 | 00 | 63.9 | 59.6 | 1020 | 01 | 5,8 | 2 | 9 | 1 | 270 | 1 | 32.88 | 0.56 |
| 309 | 0425 | 8/9 | 39°03'N | 127°01'W | 61.2 | 330 | 09 | 63.0 | 59.2 | 1021 | 02 | 5,6 | 1 | 9 | 1 | 270 | 1 | 32.86 | 0.61 |
| 310 | 1400 | 8/9 | 39°08'N | 126°39'W | 62.9 | 270 | 06 | 64.7 | 60.8 | 1019 | 02 | 6 | 8 | 9 | 1 | 290 | 2 | 32.88 | 0.50 |
| 311 | 1630 | 8/9 | 39°09'N | 126°15'W | 62.9 | 250 | 04 | 65.0 | 61.0 | 1019 | 02 | 0 | 9 | 9 | 1 | 320 | 2 | 32.88 | 0.60 |
| 312 | 1830 | 8/9 | 39°10'N | 125°56'W | 62.7 | 360 | 13 | 61.5 | 59.9 | 1019 | 28 | 0 | 8 | 9 | 2 | 320 | 2 | 32.86 | 0.60 |
| 313 | 2030 | 8/9 | 39°11'N | 125°37'W | 63.0 | 320 | 08 | 64.0 | 60.0 | 1019 | 01 | 0,6 | 6 | 9 | 2 | 340 | 1 | 32.88 | 0.56 |
| 314 | 2130 | 8/9 | 39°11'N | 125°37'W | 63.1 | 320 | 08 | 64.0 | 60.0 | 1019 | 01 | 0,6 | 6 | 9 | 2 | 340 | 1 | 32.88 | - |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 315 | 2300 | 8/9 | 39°09'N | 125°26'W | 62.8 | 310 | 15 | 64.2 | 62.2 | 1022 | 01 | 0,6 | 2 | 9 | 2 | 340 | 1 | 32.89 | 0.55 |
| 316 | 0130 | 8/10 | 39°05'N | 125°02'W | 62.5 | 360 | 15 | 63.1 | 59.9 | 1017 | 01 | 8 | 1 | 9 | 2 | 300 | 1 | 32.87 | 0.54 |
| 317 | 0353 | 8/10 | 39°01'N | 124°37'W | 58.0 | 330 | 17 | 61.0 | 58.5 | 1017 | 02 | 8 | 1 | 9 | 3 | 310 | 1 | 32.81 | 0.60 |
| 318 | 1205 | 8/10 | 38°54'N | 124°21'W | 56.1 | 330 | 18 | 58.9 | 57.1 | 1015 | 02 | 8 | 1 | 9 | 3 | 330 | 2 | 33.17 | 1.17 |
| 319 | 1305 | 8/10 | 38°54'N | 124°21'W | 56.2 | 330 | 20 | 58.9 | 57.1 | 1015 | 02 | 8 | 1 | 9 | 3 | 330 | 2 | 33.17 | - |
| 320 | 1630 | 8/10 | 38°44'N | 124°44'W | 57.5 | 320 | 18 | 63.3 | 59.8 | 1016 | 02 | 8 | 1 | 9 | 3 | 330 | 2 | 33.38 | 1.10 |
| 321 | 1830 | 8/10 | 38°39'N | 124°55'W | 57.6 | 310 | 16 | 64.8 | 60.2 | 1017 | 02 | 8 | 1 | 9 | 3 | 330 | 2 | 33.30 | 1.19 |
| 322 | 2000 | 8/10 | 38°36'N | 125°03'W | 60.9 | 320 | 18 | 65.1 | 60.3 | 1017 | 02 | 8 | 1 | 9 | 3 | 300 | 2 | 33.03 | 0.94 |
| 323 | 2200 | 8/10 | 38°33'N | 125°19'W | 63.0 | 320 | 22 | 66.7 | 61.2 | 1018 | 02 | 8 | 1 | 9 | 3 | 320 | 2 | 32.87 | 0.71 |
| 324 | 2335 | 8/10 | 38°31'N | 125°31'W | 62.6 | 340 | 20 | 64.1 | 59.9 | 1017 | 03 | 8 | 6 | 9 | 3 | 320 | 2 | 32.85 | 0.56 |
| 325 | 0215 | 8/11 | 38°28'N | 125°48'W | 62.7 | 340 | 18 | 64.3 | 61.2 | 1017 | 01 | 8 | 2 | 9 | 3 | 320 | 2 | 32.95 | 0.63 |
| 326 | 0410 | 8/11 | 38°26'N | 126°04'W | 62.8 | 330 | 22 | 62.8 | 59.2 | 1018 | 01 | 8 | 2 | 9 | 3 | XX | X | 32.86 | 0.56 |
| 327 | 0515 | 8/11 | 38°26'N | 126°04'W | 62.7 | 330 | 22 | 62.8 | 59.2 | 1018 | 01 | 8 | 2 | 9 | 3 | XX | X | 32.86 | - |
| 328 | 1000 | 8/11 | 38°40'N | 126°33'W | 62.6 | 330 | 20 | 63.5 | 59.6 | 1017 | 02 | 8 | 3 | 9 | 3 | XX | X | 32.90 | 0.54 |
| 329 | 1245 | 8/11 | 38°26'N | 126°47'W | 61.2 | 020 | 16 | 63.8 | 60.3 | 1017 | 02 | 8 | 4 | 9 | 3 | XX | X | 32.93 | 0.69 |
| 330 | 1430 | 8/11 | 38°19'N | 127°01'W | 60.2 | 340 | 09 | 63.8 | 60.4 | 1018 | 02 | 8 | 3 | 9 | 3 | 320 | 2 | 32.99 | 0.63 |
| 331 | 1630 | 8/11 | 38°13'N | 127°16'W | 63.2 | 330 | 15 | 65.3 | 60.8 | 1019 | 03 | 0,6,8 | 6 | 9 | 2 | 360 | 1 | 32.88 | 0.58 |
| 332 | 1740 | 8/11 | 38°11'N | 127°24'W | 63.8 | 360 | 12 | 65.3 | 61.7 | 1019 | 02 | 0,6,8 | 6 | 9 | 2 | 360 | 1 | 32.95 | 0.58 |
| 333 | 2100 | 8/11 | 38°03'N | 127°50'W | 63.7 | 330 | 14 | 64.7 | 60.8 | 1021 | 01 | 6,2,8 | 2 | 9 | 2 | 320 | 1 | 33.04 | 0.50 |
| 334 | 2200 | 8/11 | 38°03'N | 127°51'W | 63.8 | 330 | 14 | 64.7 | 60.8 | 1021 | 01 | 6,2,8 | 2 | 9 | 2 | 320 | 1 | 33.04 | - |
| 335 | 0030 | 8/12 | 37°59'N | 128°08'W | 64.4 | 330 | 13 | 66.7 | 61.5 | 1017 | 02 | 8 | 2 | 9 | 2 | 300 | 2 | 32.94 | 0.44 |
| 336 | 0315 | 8/12 | 37°54'N | 128°29'W | 63.9 | 340 | 16 | 64.9 | 60.7 | 1021 | 01 | 8 | 1 | 9 | 2 | 340 | 1 | 32.94 | 0.47 |
| 337 | 0600 | 8/12 | 37°48'N | 128°55'W | 64.1 | 330 | 15 | 63.8 | 59.8 | 1022 | 02 | 8 | 2 | 9 | 2 | 310 | 1 | 32.97 | 0.46 |
| 338 | 0800 | 8/12 | 37°42'N | 129°17'W | 65.5 | 330 | 13 | 64.2 | 60.0 | 1023 | 01 | 8 | 1 | 9 | 2 | 310 | 1 | 33.03 | 0.39 |
| 339 | 1005 | 8/12 | 37°37'N | 129°39'W | 65.5 | 320 | 17 | 65.5 | 61.5 | 1022 | 00 | X | X | 8 | 2 | XX | X | 33.08 | 0.52 |
| 340 | 1205 | 8/12 | 37°31'N | 130°01'W | 65.4 | 340 | 15 | 65.3 | 61.1 | 1023 | 02 | 6,8 | 8 | 8 | 2 | XX | X | 33.06 | 0.50 |
| 341 | 1300 | 8/12 | 37°29'N | 130°12'W | 65.3 | 320 | 11 | 64.7 | 59.2 | 1023 | 02 | 6 | 8 | 9 | 2 | XX | X | 33.06 | NS |
| 342 | 1355 | 8/12 | 37°29'N | 130°12'W | 65.3 | 320 | 11 | 64.7 | 59.2 | 1023 | 02 | 6 | 8 | 9 | 2 | XX | X | 33.06 | - |
| 343 | 1630 | 8/12 | 37°26'N | 129°55'W | 65.6 | 360 | 15 | 64.4 | 58.8 | 1025 | 02 | 6 | 8 | 9 | 2 | 360 | 1 | 33.22 | 0.45 |
| 344 | 1830 | 8/12 | 37°22'N | 129°37'W | 65.1 | 360 | 13 | 65.0 | 59.9 | 1024 | 02 | 6 | 8 | 9 | 2 | 360 | 1 | 33.33 | 0.57 |
| 345 | 2100 | 8/12 | 37°19'N | 129°20'W | 65.6 | 360 | 16 | 65.4 | 60.6 | 1024 | 02 | 6 | 8 | 9 | 2 | 360 | 1 | 33.19 | 0.44 |
| 346 | 2310 | 8/12 | 37°16'N | 129°08'W | 64.3 | 350 | 14 | 66.4 | 62.0 | 1023 | 02 | 6 | 8 | 9 | 2 | 360 | 1 | 33.10 | 0.44 |
| 347 | 0230 | 8/13 | 37°11'N | 128°46'W | 64.2 | 350 | 15 | 64.0 | 61.0 | 1023 | 02 | 6 | 8 | 9 | 3 | 360 | 1 | 33.04 | 0.44 |
| 348 | 0405 | 8/13 | 37°09'N | 128°35'W | 64.3 | 360 | 15 | 64.3 | 60.0 | 1023 | 02 | 6 | 8 | 9 | 3 | XX | X | 33.10 | 0.50 |
| 349 | 0505 | 8/13 | 37°09'N | 128°35'W | 64.2 | 360 | 15 | 64.3 | 60.0 | 1023 | 02 | 6 | 8 | 9 | 3 | XX | X | 33.10 | - |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 350 | 1400 | 8/13 | 37°02'N | 128°23'W | 64.1 | 010 | 12 | 63.9 | 60.0 | 1023 | 02 | 6 | 8 | 9 | 3 | 010 | 1 | 32.99 | - |
| 351 | 1635 | 8/13 | 37°02'N | 128°04'W | 64.3 | 020 | 26 | 64.2 | 60.4 | 1023 | 02 | 8 | 8 | 9 | 2 | 360 | 2 | 33.03 | 0.32 |
| 352 | 1835 | 8/13 | 37°02'N | 127°39'W | 63.8 | 020 | 29 | 64.4 | 60.4 | 1023 | 02 | 8 | 8 | 9 | 3 | 360 | 2 | 33.01 | 0.33 |
| 353 | 2100 | 8/13 | 37°01'N | 127°30'W | 63.5 | 020 | 19 | 64.6 | 60.3 | 1022 | 01 | 8 | 7 | 9 | 3 | 360 | 3 | 32.95 | 0.31 |
| 354 | 2345 | 8/13 | 36°58'N | 127°11'W | 63.4 | 350 | 21 | 63.7 | 60.3 | 1021 | 01 | 8 | 4 | 9 | 3 | 360 | 3 | 32.94 | 0.30 |
| 355 | 0207 | 8/14 | 36°54'N | 126°51'W | 63.4 | 350 | 21 | 63.3 | 61.3 | 1020 | 01 | 8 | 2 | 9 | 3 | 360 | 3 | 32.92 | 0.44 |
| 356 | 0400 | 8/14 | 36°52'N | 126°35'W | 63.4 | 330 | 20 | 63.0 | 60.9 | 1020 | 02 | 8 | 2 | 9 | 3 | 360 | 3 | 32.95 | 0.57 |
| 357 | 0500 | 8/14 | 36°52'N | 126°35'W | 63.3 | 330 | 20 | 63.0 | 60.9 | 1020 | 02 | 8 | 2 | 9 | 3 | 360 | 3 | 32.95 | - |
| 358 | 1405 | 8/14 | 36°48'N | 126°21'W | 62.7 | 350 | 18 | 62.8 | 58.0 | 1019 | 02 | 8 | 7 | 9 | 3 | 360 | 3 | 32.92 | 0.33 |
| 359 | 1630 | 8/14 | 36°52'N | 126°01'W | 62.8 | 350 | 21 | 62.5 | 57.1 | 1019 | 02 | 6 | 6 | 9 | 3 | 360 | 3 | 32.92 | - |
| 360 | 1905 | 8/14 | 36°57'N | 125°40'W | 62.6 | 330 | 19 | 63.1 | 59.6 | 1019 | 02 | 6 | 6 | 9 | 3 | 010 | 3 | 32.90 | 0.33 |
| 361 | 2100 | 8/14 | 37°01'N | 125°26'W | 63.1 | 340 | 16 | 63.0 | 59.8 | 1018 | 02 | 4 | 6 | 9 | 3 | 350 | 3 | 32.94 | - |
| 362 | 2300 | 8/14 | 37°03'N | 125°14'W | 61.3 | 340 | 16 | 62.7 | 59.6 | 1018 | 01 | 8 | 1 | 9 | 3 | 350 | 3 | 32.97 | 0.41 |
| 363 | 0210 | 8/15 | 37°08'N | 124°54'W | 60.0 | 330 | 15 | 62.1 | 59.9 | 1017 | 02 | 8 | 1 | 9 | 3 | 350 | 3 | 33.04 | 0.50 |
| 364 | 0400 | 8/15 | 37°12'N | 124°41'W | 60.3 | 320 | 17 | 61.1 | 59.2 | 1017 | 02 | 8 | 1 | 9 | 3 | 350 | 3 | 33.21 | - |
| 365 | 0550 | 8/15 | 37°12'N | 124°41'W | 59.8 | 320 | 17 | 61.1 | 59.2 | 1017 | 02 | 8 | 1 | 9 | 3 | XX | X | 33.21 | 0.57 |
| 366 | 0800 | 8/15 | 37°19'N | 124°16'W | 59.5 | 320 | 21 | 61.1 | 58.8 | 1016 | 02 | 8 | 1 | 9 | 3 | XX | X | 33.22 | 0.59 |
| 367 | 1000 | 8/15 | 37°26'N | 123°53'W | 57.3 | 270 | 24 | 60.2 | 58.2 | 1016 | 00 | X | X | 9 | 2 | XX | X | 33.58 | 0.69 |
| 368 | 1205 | 8/15 | 37°31'N | 123°32'W | 57.9 | 320 | 23 | 58.3 | 56.4 | 1016 | 00 | X | X | 9 | 3 | XX | X | 33.66 | 0.63 |
| 369 | 1305 | 8/15 | 37°31'N | 123°32'W | 58.0 | 320 | 23 | 58.3 | 56.4 | 1016 | 00 | X | X | 9 | 3 | XX | X | 33.66 | - |
| 370 | 0005 | 8/27 | 37°24'N | 122°35'W | 56.5 | 160 | 01 | 59.8 | 56.6 | 1020 | 03 | 8 | 7 | 9 | 1 | 080 | 1 | 32.70 | 1.43 |
| 371 | 0530 | 8/27 | 36°44'N | 122°25'W | 59.4 | 320 | 15 | 58.1 | 56.3 | 1020 | 00 | X | X | 8 | 1 | XX | X | - | - |
| 372 | 0740 | 8/27 | 36°25'N | 122°20'W | 56.2 | 320 | 12 | 60.8 | 57.5 | 1020 | 00 | X | X | 8 | 1 | XX | X | 33.40 | 0.89 |
| 373 | 0930 | 8/27 | 36°04'N | 122°16'W | 58.0 | 320 | 18 | 60.5 | 57.7 | 1020 | 00 | X | X | 8 | 2 | XX | X | - | - |
| 374 | 1200 | 8/27 | 35°39'N | 122°13'W | 56.5 | 320 | 18 | 59.8 | 57.0 | 1020 | 00 | X | X | 8 | 3 | XX | X | 33.60 | 1.12 |
| 375 | 1258 | 8/27 | 35°39'N | 122°13'W | 56.2 | 320 | 18 | 59.7 | 56.9 | 1020 | 00 | 1, 3 | 2 | 8 | 3 | 340 | 1 | 33.60 | - |
| 376 | 1530 | 8/27 | 35°32'N | 122°33'W | 57.5 | 340 | 26 | 61.0 | 57.8 | 1020 | 03 | 1, 3 | 3 | 9 | 3 | 340 | 1 | 33.42 | 0.88 |
| 377 | 1800 | 8/27 | 35°25'N | 122°51'W | 58.2 | 350 | 24 | 61.5 | 58.2 | 1022 | 03 | 4 | 6 | 8 | 3 | 340 | 1 | 33.44 | 0.75 |
| 378 | 2100 | 8/27 | 35°14'N | 123°13'W | 60.0 | 360 | 23 | 64.3 | 60.3 | 1022 | 01 | 4 | 3 | 9 | 3 | 340 | 1 | 33.55 | 0.62 |
| 379 | 2330 | 8/27 | 35°01'N | 123°28'W | 62.5 | 360 | 22 | 64.8 | 60.6 | 1021 | 01 | 4 | 1 | 9 | 3 | 340 | 1 | 33.48 | 0.68 |
| 380 | 0205 | 8/28 | 34°48'N | 123°43'W | 62.2 | 330 | 21 | 63.8 | 60.1 | 1020 | 01 | 4 | 1 | 9 | 3 | 340 | 1 | 33.51 | 0.63 |
| 381 | 0430 | 8/28 | 34°34'N | 124°05'W | 63.0 | 330 | 21 | 63.0 | 59.2 | 1021 | 00 | X | X | 8 | 3 | 340 | 1 | 33.31 | 0.74 |
| 382 | 0630 | 8/28 | 34°25'N | 124°26'W | 63.9 | 340 | 20 | 63.8 | 59.7 | 1021 | 00 | X | X | 8 | 3 | XX | X | 33.15 | 0.69 |
| 383 | 0835 | 8/28 | 34°16'N | 124°48'W | 64.1 | 320 | 18 | 64.8 | 60.4 | 1021 | 00 | X | X | 8 | 3 | XX | X | 33.12 | 0.63 |
| 384 | 1035 | 8/28 | 34°06'N | 125°10'W | 63.7 | 320 | 20 | 62.8 | 59.8 | 1020 | 00 | X | X | 8 | 3 | XX | X | 33.13 | 0.77 |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 385 | 1258 | 8/28 | 33°54'N | 125°36'W | 64.0 | 320 | 20 | 64.0 | 58.8 | 1021 | 00 | X | X | 8 | 3 | XX | X | 33.24 | 0.58 |
| 386 | 1356 | 8/28 | 33°54'N | 125°36'W | 63.9 | 320 | 19 | 63.0 | 58.0 | 1021 | 03 | 6,8 | 3 | 8 | 3 | 320 | 2 | 33.24 | - |
| 387 | 1630 | 8/28 | 33°48'N | 125°56'W | 65.0 | 320 | 18 | 66.7 | 59.8 | 1021 | 02 | 6,8 | 2 | 9 | 3 | 320 | 2 | 33.28 | 0.84 |
| 388 | 1900 | 8/28 | 33°42'N | 126°15'W | 66.1 | 320 | 16 | 68.3 | 61.8 | 1021 | 02 | 6,8 | 2 | 9 | 2 | 320 | 2 | 33.37 | 0.69 |
| 389 | 2100 | 8/28 | 33°37'N | 126°30'W | 66.0 | 350 | 13 | 66.9 | 60.9 | 1021 | 02 | 8 | 3 | 9 | 2 | 320 | 2 | 33.37 | - |
| 390 | 0035 | 8/29 | 33°24'N | 127°06'W | 66.8 | 310 | 14 | 68.7 | 62.7 | 1020 | 02 | 8 | 4 | 9 | 2 | 320 | 2 | 33.37 | 0.57 |
| 391 | 0356 | 8/29 | 33°08'N | 127°47'W | 66.3 | 330 | 08 | 66.2 | 61.5 | 1020 | 02 | 6,8 | 4 | 9 | 2 | 320 | 2 | 33.22 | 0.47 |
| 392 | 0458 | 8/29 | 33°08'N | 127°47'W | 66.3 | 330 | 08 | 66.1 | 61.3 | 1020 | 00 | X | X | 9 | 2 | 320 | 2 | 33.22 | - |
| 393 | 0900 | 8/29 | 32°55'N | 128°25'W | 66.5 | 290 | 08 | 68.2 | 63.2 | 1020 | 00 | X | X | 9 | 2 | XX | X | - | - |
| 394 | 1300 | 8/29 | 32°38'N | 129°10'W | 67.2 | 310 | 07 | 66.0 | 61.2 | 1019 | 00 | X | X | 9 | 1 | XX | X | 33.39 | - |
| 395 | 1600 | 8/29 | 32°26'N | 129°43'W | 68.3 | 340 | 05 | 67.8 | 62.1 | 1020 | 02 | 6,8 | 1 | 9 | 1 | 010 | 1 | 33.64 | - |
| 396 | 1657 | 8/29 | 32°26'N | 129°43'W | 68.3 | 340 | 05 | 69.0 | 63.0 | 1020 | 03 | 6,8 | 2 | 9 | 1 | 010 | 1 | 33.64 | - |
| 397 | 2100 | 8/29 | 32°10'N | 130°28'W | 70.0 | 320 | 07 | 73.4 | 65.4 | 1020 | 03 | 6,8 | 4 | 9 | 1 | 010 | 1 | 34.04 | - |
| 398 | 0100 | 8/30 | 31°55'N | 131°11'W | 71.0 | 320 | 04 | 71.5 | 64.0 | 1019 | 02 | 6,8 | 2 | 9 | 1 | 010 | 1 | 34.04 | - |
| 399 | 0353 | 8/30 | 31°43'N | 131°44'W | 71.1 | 270 | 04 | 70.3 | 63.5 | 1019 | 02 | 6 | 3 | 9 | 1 | 010 | 1 | 34.09 | - |
| 400 | 0445 | 8/30 | 31°43'N | 131°44'W | 71.1 | 270 | 05 | 70.5 | 64.0 | 1020 | 00 | X | X | 9 | 1 | 010 | 1 | 34.09 | - |
| 401 | 0900 | 8/30 | 31°29'N | 132°22'W | 69.4 | 270 | 05 | 71.3 | 65.0 | 1020 | 00 | X | X | 8 | 1 | XX | X | 33.98 | - |
| 402 | 1300 | 8/30 | 31°13'N | 133°03'W | 70.4 | 270 | 14 | 72.0 | 67.4 | 1019 | 00 | X | X | 8 | 1 | XX | X | 33.93 | - |
| 403 | 1555 | 8/30 | 31°01'N | 133°36'W | 70.2 | 270 | 08 | 71.0 | 67.2 | 1021 | 03 | 1,4,8 | 2 | 9 | 1 | XX | 1 | 34.27 | - |
| 404 | 1655 | 8/30 | 31°01'N | 133°36'W | 70.2 | 270 | 08 | 72.0 | 67.6 | 1021 | 02 | 1,4,8 | 4 | 9 | 1 | XX | 1 | 34.27 | - |
| 405 | 2100 | 8/30 | 30°44'N | 134°20'W | 70.5 | 280 | 12 | 73.0 | 69.0 | 1021 | 03 | 4,1,8 | 3 | 9 | 2 | XX | 1 | 34.31 | - |
| 406 | 0100 | 8/31 | 30°27'N | 135°01'W | 71.1 | 280 | 12 | 74.3 | 69.0 | 1021 | 02 | 4,8 | 6 | 9 | 2 | 320 | 1 | 34.11 | - |
| 407 | 0357 | 8/31 | 30°14'N | 135°33'W | 71.4 | 280 | 09 | 72.9 | 68.1 | 1021 | 02 | 4,8 | 2 | 9 | 1 | 320 | 1 | 34.25 | - |
| 408 | 0450 | 8/31 | 30°14'N | 135°33'W | 71.4 | 280 | 09 | 72.5 | 68.0 | 1021 | 00 | X | X | 9 | 1 | 320 | 1 | 34.25 | - |
| 409 | 0850 | 8/31 | 30°03'N | 136°05'W | 70.5 | 260 | 10 | 72.8 | 68.8 | 1022 | 00 | X | X | 9 | 1 | XX | X | 34.31 | - |
| 410 | 1300 | 8/31 | 29°46'N | 136°54'W | 71.2 | 300 | 11 | 71.1 | 67.0 | 1022 | 00 | X | X | 9 | 1 | XX | X | 34.88 | - |
| 411 | 1655 | 8/31 | 29°29'N | 137°39'W | 72.3 | 280 | 09 | 72.5 | 69.4 | 1023 | 03 | 1,4,8 | 5 | 9 | 1 | 300 | 2 | 35.25 | - |
| 412 | 1749 | 8/31 | 29°29'N | 137°39'W | 72.3 | 280 | 08 | 72.9 | 68.4 | 1023 | 02 | 4,6,8 | 5 | 9 | 1 | 300 | 2 | 35.25 | - |
| 413 | 2200 | 8/31 | 29°12'N | 138°23'W | 73.5 | 300 | 12 | 76.8 | 70.4 | 1023 | 02 | 4,6,8 | 6 | 9 | 1 | 300 | 2 | 35.35 | - |
| 414 | 0200 | 9/1 | 28°57'N | 139°03'W | 73.2 | 330 | 07 | 73.8 | 69.2 | 1023 | 50 | 4,6,8 | 7 | 9 | 1 | 300 | 2 | 35.41 | - |
| 415 | 0450 | 9/1 | 28°45'N | 139°36'W | 73.2 | 330 | 05 | 73.6 | 69.8 | 1023 | 21 | X | 7 | 6 | 2 | XX | 2 | 35.43 | - |
| 416 | 0545 | 9/1 | 28°45'N | 139°36'W | 73.3 | 330 | 07 | 73.7 | 69.0 | 1024 | 21 | X | 8 | 6 | 1 | XX | 2 | 35.43 | - |
| 417 | 1000 | 9/1 | 28°29'N | 140°14'W | 73.3 | 350 | 06 | 74.0 | 69.8 | 1023 | 00 | X | X | 9 | 1 | XX | 2 | 35.34 | - |
| 418 | 1305 | 9/1 | 28°17'N | 140°47'W | 73.7 | 350 | 06 | 73.4 | 69.4 | 1022 | 00 | X | X | 8 | 1 | XX | 2 | 35.32 | - |
| 419 | 1655 | 9/1 | 28°01'N | 141°30'W | 73.1 | 030 | 08 | 74.8 | 69.8 | 1023 | 03 | 1,8 | 2 | 9 | 1 | 070 | 1 | 35.37 | - |

Table 3.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 40 (NEPAS)(for coded values see H. O. Pub. 606-c)(cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 420 | 1755 | 9/1 | 28°01'N | 141°30'W | 73.2 | 030 | 07 | 74.9 | 69.1 | 1023 | 03 | 5,8 | 4 | 9 | 1 | 070 | 1 | 35.37 | - |
| 421 | 2200 | 9/1 | 27°43'N | 142°13'W | 74.5 | 050 | 10 | 72.2 | 69.9 | 1023 | 02 | 6 | 2 | 9 | 1 | 120 | 1 | 35.41 | - |
| 422 | 0100 | 9/2 | 27°32'N | 142°43'W | 74.1 | 050 | 10 | 76.8 | 70.0 | 1021 | 02 | 5,6 | 4 | 9 | 1 | 130 | 1 | 35.37 | - |
| 423 | 0450 | 9/2 | 27°16'N | 143°27'W | 74.1 | 050 | 10 | 76.2 | 70.0 | 1022 | 02 | 6 | 2 | 9 | 1 | 130 | 1 | 35.32 | - |
| 424 | 0547 | 9/2 | 27°16'N | 143°27'W | 74.1 | 050 | 10 | 74.0 | 69.9 | 1022 | 00 | X | X | 9 | 1 | 130 | 1 | 35.32 | - |
| 425 | 1000 | 9/2 | 27°00'N | 144°06'W | 73.7 | 100 | 08 | 74.8 | 70.7 | 1022 | 00 | X | X | 8 | 1 | XX | X | 35.41 | - |
| 426 | 1245 | 9/2 | 26°46'N | 144°38'W | 73.7 | 100 | 08 | 73.8 | 68.4 | 1021 | 00 | X | X | 9 | 1 | XX | X | 35.41 | - |
| 427 | 1655 | 9/2 | 26°28'N | 145°20'W | 73.4 | 050 | 05 | 71.8 | 68.4 | 1022 | 21 | 0,8 | 8 | 6 | 1 | 100 | 1 | 35.46 | - |
| 428 | 1752 | 9/2 | 26°28'N | 145°20'W | 73.4 | 050 | 05 | 74.0 | 69.3 | 1022 | 01 | 0,8 | 6 | 8 | 1 | 100 | 1 | 35.46 | - |
| 429 | 2200 | 9/2 | 26°10'N | 146°01'W | 75.3 | 090 | 13 | 76.3 | 70.4 | 1021 | 01 | 0,8 | 4 | 9 | 2 | 100 | 1 | 35.26 | - |
| 430 | 0100 | 9/3 | 25°59'N | 146°28'W | 75.4 | 250 | 10 | 75.0 | 69.3 | 1019 | 02 | 0,8 | 5 | 9 | 2 | 100 | 1 | 35.26 | - |
| 431 | 0450 | 9/3 | 25°41'N | 147°10'W | 74.3 | 070 | 10 | 75.9 | 70.9 | 1019 | 02 | 1,6,8,3 | 7 | 9 | 2 | 100 | 1 | 35.30 | - |
| 432 | 1000 | 9/3 | 25°25'N | 147°48'W | 75.0 | 140 | 08 | 73.6 | 69.9 | 1020 | 50 | X | 8 | 9 | 2 | 100 | 1 | 35.41 | - |
| 433 | 1300 | 9/3 | 25°12'N | 148°20'W | 75.3 | 100 | 13 | 74.4 | 70.8 | 1019 | 00 | X | X | 8 | 2 | XX | X | 35.37 | - |
| 434 | 1655 | 9/3 | 24°55'N | 149°00'W | 75.6 | 100 | 15 | 75.6 | 71.5 | 1019 | 02 | 4,6,8 | 6 | 9 | 2 | 070 | 2 | 35.26 | - |
| 435 | 1802 | 9/3 | 24°55'N | 149°00'W | 75.5 | 100 | 18 | 73.8 | 71.3 | 1019 | 03 | 1,6 | 6 | 9 | 2 | 070 | 2 | 35.26 | - |
| 436 | 2200 | 9/3 | 24°38'N | 149°40'W | 75.4 | 140 | 05 | 75.2 | 71.6 | 1019 | 16 | 0,1,8 | 7 | 6 | 2 | 130 | 2 | 35.39 | - |
| 437 | 0100 | 9/4 | 24°25'N | 150°09'W | 76.6 | 070 | 09 | 77.5 | 71.9 | 1018 | 15 | 1,5,7,6 | 7 | 7 | 2 | 130 | 2 | 35.39 | - |
| 438 | 0550 | 9/4 | 24°07'N | 150°51'W | 76.0 | 100 | 07 | 75.5 | 71.6 | 1019 | 00 | X | 6 | 9 | 2 | 130 | 2 | 35.25 | - |
| 439 | 0645 | 9/4 | 24°07'N | 150°51'W | 76.1 | 100 | 08 | 75.2 | 71.3 | 1019 | 00 | X | X | 9 | 2 | 130 | 2 | 35.25 | - |
| 440 | 1100 | 9/4 | 23°52'N | 151°28'W | 75.9 | 100 | 13 | 72.7 | 71.0 | 1018 | 00 | X | X | 9 | 2 | XX | X | 35.35 | - |
| 441 | 1400 | 9/4 | 23°39'N | 151°59'W | 76.4 | 070 | 07 | 75.6 | 71.7 | 1017 | 00 | X | X | 9 | 2 | XX | X | - | - |
| 442 | 1753 | 9/4 | 23°21'N | 152°41'W | 76.7 | 070 | 14 | 76.5 | 73.0 | 1018 | 15 | 6,8,1 | 6 | 8 | 3 | 070 | 1 | 34.92 | - |
| 443 | 1900 | 9/4 | 23°21'N | 152°41'W | 76.7 | 070 | 12 | 76.5 | 72.8 | 1018 | 15 | 1,6,8 | 6 | 8 | 3 | 070 | 1 | 34.92 | - |
| 444 | 2300 | 9/4 | 23°04'N | 153°24'W | 76.8 | 040 | 07 | 77.0 | 73.3 | 1017 | 50 | 1,6,8 | 8 | 8 | 2 | 070 | 1 | 35.19 | - |
| 445 | 0200 | 9/5 | 22°51'N | 153°54'W | 77.2 | 050 | 11 | 79.8 | 78.8 | 1015 | 01 | 1,6,8 | 5 | 8 | 2 | 070 | 1 | 35.17 | - |
| 446 | 0550 | 9/5 | 22°32'N | 154°39'W | 76.8 | 060 | 06 | 77.9 | 72.4 | 1017 | 02 | X | 7 | 9 | 2 | 060 | 1 | 35.17 | - |
| 447 | 0645 | 9/5 | 22°32'N | 154°39'W | 76.7 | 060 | 15 | 77.4 | 70.9 | 1017 | 01 | X | 2 | 9 | 2 | 060 | 1 | 35.17 | - |
| 448 | 1100 | 9/5 | 22°15'N | 155°17'W | 76.9 | 090 | 15 | 76.4 | 72.4 | 1016 | 50 | X | 2 | 7 | 2 | XX | X | 35.19 | - |
| 449 | 1500 | 9/5 | 21°58'N | 155°58'W | 77.3 | 090 | 16 | 76.4 | 70.8 | 1015 | 00 | X | X | 7 | 2 | XX | X | 34.99 | |
| 449A | 1755 | 9/5 | 21°45'N | 156°30'W | 76.8 | 090 | 18 | 77.8 | 72.9 | 1016 | 03 | 1,8 | 8 | 9 | 3 | 090 | 1 | 34.94 | - |
| 450 | 1900 | 9/5 | 21°45'N | 156°30'W | 76.7 | 090 | 16 | 76.6 | 72.2 | 1016 | 02 | 1,8 | 8 | 9 | 3 | 090 | 1 | 34.94 | - |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 1 | 1730 | 6/12 | 22°13'N | 156°37'W | 76.5 | 080 | 17 | 77.0 | 70.2 | 1020 | 02 | 6 | 6 | 8 | 4 | 090 | 4 | - | - |
| 2 | 2330 | 6/12 | 22°41'N | 156°09'W | 76.5 | 090 | 20 | 80.0 | 72.0 | 1020 | 02 | 6 | 3 | 8 | 4 | 090 | 4 | - | - |
| 3 | 0530 | 6/13 | 23°14'N | 155°48'W | 76.5 | 090 | 18 | 78.0 | 72.0 | 1020 | 02 | 6 | 1 | 9 | 3 | 090 | 4 | 35.19 | - |
| 4 | 1130 | 6/13 | 23°45'N | 155°17'W | 76.0 | 090 | 16 | 76.7 | 72.0 | 1021 | 00 | 6 | 8 | 7 | 3 | 090 | 4 | - | - |
| 5 | 1730 | 6/13 | 24°17'N | 154°45'W | 76.0 | 100 | 20 | 76.3 | 72.0 | 1022 | 03 | 6 | 7 | 7 | 4 | 100 | 4 | - | - |
| 6 | 2330 | 6/13 | 24°49'N | 154°13'W | 76.5 | 090 | 19 | 79.0 | 74.0 | 1022 | 02 | 4,5,6 | 7 | 8 | 4 | 090 | 4 | 35.34 | - |
| 7 | 0530 | 6/14 | 25°19'N | 153°41'W | 76.0 | 080 | 19 | 76.0 | 71.5 | 1022 | 01 | 6,8 | 5 | 8 | 4 | 090 | 4 | 35.34 | - |
| 8 | 1130 | 6/14 | 25°51'N | 153°08'W | 75.5 | 080 | 15 | 75.1 | 70.0 | 1022 | 01 | 1,4,6 | 4 | 8 | 4 | 090 | 4 | - | - |
| 9 | 1730 | 6/14 | 26°24'N | 152°36'W | 75.0 | 080 | 16 | 76.5 | 71.0 | 1020 | 03 | 1,6,8 | 5 | 8 | 3 | 110 | 4 | 35.48 | - |
| 10 | 2330 | 6/14 | 26°54'N | 152°09'W | 75.5 | 090 | 12 | 76.5 | 71.0 | 1022 | 01 | 1,6,8 | 2 | 9 | 3 | 110 | 1 | - | - |
| 11 | 0530 | 6/15 | 27°26'N | 151°36'W | 75.5 | 090 | 15 | 75.5 | 70.0 | 1022 | 03 | 1,6,8 | 7 | 9 | 4 | 110 | 4 | 35.57 | - |
| 12 | 1130 | 6/15 | 27°55'N | 151°01'W | 75.2 | 070 | 11 | 74.0 | 70.0 | 1021 | 02 | 8 | 2 | 7 | 2 | 070 | 1 | - | - |
| 13 | 1730 | 6/15 | 28°31'N | 150°25'W | 75.0 | 090 | 14 | 76.0 | 70.5 | 1021 | 02 | 1,4,6,8 | 3 | 9 | 2 | 090 | 1 | 35.68 | - |
| 14 | 0005 | 6/16 | 29°11'N | 149°53'W | 76.0 | 090 | 15 | 79.0 | 69.0 | 1021 | 01 | 1,6,8 | 3 | 9 | 4 | 090 | 1 | - | - |
| 15 | 0530 | 6/16 | 29°41'N | 149°15'W | 74.0 | 090 | 12 | 74.5 | 68.0 | 1020 | 02 | 1,6,8 | 3 | 9 | 3 | 090 | 4 | 35.34 | 0.37 |
| 16 | 1130 | 6/16 | 30°17'N | 148°41'W | 73.2 | 090 | 04 | 72.0 | 66.0 | 1020 | 02 | 8 | 6 | 7 | 2 | 090 | 1 | - | - |
| 17 | 1730 | 6/16 | 30°53'N | 148°01'W | 73.2 | 090 | 04 | 73.8 | 67.0 | 1020 | 02 | 6,2,4 | 1 | 9 | 2 | 090 | 1 | 35.19 | 0.22 |
| 18 | 2330 | 6/16 | 31°27'N | 147°21'W | 74.5 | 070 | 07 | 75.0 | 68.0 | 1022 | 02 | 5,1 | 3 | 9 | 3 | 130 | 1 | - | - |
| 19 | 0530 | 6/17 | 31°58'N | 146°40'W | 73.8 | 080 | 10 | 74.0 | 68.0 | 1023 | 03 | 4,5 | 4 | 9 | 2 | 090 | 1 | 34.88 | 0.25 |
| 20 | 1130 | 6/17 | 32°34'N | 146°10'W | 70.4 | 130 | 04 | 71.0 | 68.2 | 1024 | 02 | 5 | 8 | 6 | 2 | 060 | 1 | - | - |
| 21 | 1730 | 6/17 | 33°13'N | 145°38'W | 69.3 | 080 | 05 | 71.8 | 69.5 | 1026 | 03 | 1,4 | 8 | 7 | 1 | 160 | 1 | 34.36 | 0.97 |
| 22 | 2330 | 6/17 | 33°51'N | 145°02'W | 73.0 | 140 | 02 | 73.0 | 67.1 | 1023 | 02 | 8,5,2 | 1 | 9 | 2 | 000 | 1 | - | - |
| 23 | 0530 | 6/18 | 34°21'N | 144°25'W | 70.3 | 160 | 02 | 72.0 | 67.0 | 1026 | 02 | 8,5,2 | 2 | 9 | 2 | XX | 1 | 34.22 | 0.32 |
| 24 | 1130 | 6/18 | 35°02'N | 143°51'W | 69.8 | 230 | 05 | 69.8 | 67.1 | 1026 | 02 | 8 | 2 | 8 | 2 | XX | 1 | - | - |
| 25 | 1730 | 6/18 | 35°43'N | 143°17'W | 67.0 | 230 | 11 | 67.1 | 66.2 | 1023 | 02 | 1,8 | 5 | 8 | 2 | 300 | 1 | 34.29 | 0.21 |
| 26 | 2330 | 6/18 | 36°01'N | 143°00'W | 66.3 | 230 | 12 | 69.3 | 67.0 | 1024 | 02 | 6,5 | 8 | 9 | 2 | 240 | 1 | - | - |
| 27 | 0530 | 6/19 | 36°10'N | 142°52'W | 65.5 | 250 | 13 | 66.6 | 64.5 | 1023 | 02 | 6 | 8 | 7 | 3 | 250 | 2 | 33.95 | 0.30 |
| 28 | 1630 | 6/19 | 36°14'N | 142°45'W | 65.5 | 310 | 15 | 66.0 | 64.0 | 1024 | 02 | 0,6 | 9 | 7 | 4 | 300 | 1 | 34.02 | - |
| 29 | 2330 | 6/19 | 36°42'N | 141°57'W | 63.9 | 160 | 12 | 60.0 | 59.0 | 1025 | 02 | 6 | 7 | 9 | 5 | 160 | 5 | - | 0.43 |
| 30 | 0530 | 6/20 | 36°50'N | 141°44'W | 63.6 | 360 | 16 | 62.5 | 63.6 | 1023 | 02 | 0 | 8 | 8 | 2 | 350 | 1 | 33.82 | 0.46 |
| 31 | 1615 | 6/20 | 36°45'N | 141°45'W | 62.9 | 070 | 06 | 60.6 | 54.0 | 1027 | 02 | 6 | 5 | 8 | 2 | 090 | X | - | 0.32 |
| 32 | 2330 | 6/20 | 37°22'N | 140°59'W | 63.8 | 040 | 12 | 60.0 | 56.0 | 1026 | 02 | 6 | X | 8 | 2 | 020 | 1 | 33.69 | - |
| 33 | 0530 | 6/21 | 37°58'N | 140°16'W | 63.0 | 040 | 04 | 62.0 | 55.5 | 1026 | 02 | 6 | 8 | 7 | 3 | 020 | 1 | 33.68 | 1.30 |
| 34 | 1130 | 6/21 | 38°25'N | 139°44'W | 62.0 | 050 | 12 | 59.9 | 53.7 | 1026 | 02 | 6 | 8 | 6 | 3 | 050 | 2 | - | - |
| 35 | 1730 | 6/21 | 38°52'N | 139°12'W | 62.0 | 000 | 00 | 60.0 | 54.0 | 1026 | 02 | 6 | 8 | 7 | 2 | 010 | 1 | 33.51 | - |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 36 | 2330 | 6/21 | 39°19'N | 138°39'W | 61.5 | 160 | 11 | 62.5 | 57.5 | 1025 | 02 | 6 | 8 | 7 | 2 | 350 | 1 | - | - |
| 37 | 0530 | 6/22 | 39°44'N | 138°10'W | 61.8 | 190 | 13 | 61.1 | 56.2 | 1023 | 02 | 6 | 6 | 7 | 2 | 190 | 2 | 33.48 | 0.31 |
| 38 | 1600 | 6/22 | 39°43'N | 138°02'W | 61.5 | 240 | 10 | 63.0 | 58.5 | 1022 | 02 | 6 | 8 | 7 | 3 | 250 | 1 | - | 0.42 |
| 39 | 2330 | 6/22 | 40°24'N | 137°08'W | 60.4 | 220 | 11 | 65.7 | 60.2 | 1022 | 02 | 6 | 7 | 9 | 2 | 220 | 1 | - | - |
| 40 | 0530 | 6/23 | 40°52'N | 136°28'W | 60.0 | 240 | 15 | 60.0 | 59.0 | 1023 | 50 | 6 | 8 | 7 | 3 | 240 | 1 | 33.08 | 0.63 |
| 41 | 1130 | 6/23 | 41°22'N | 135°46'W | 59.5 | 010 | 08 | 59.0 | 55.5 | 1024 | 01 | 8 | 2 | 8 | 3 | 230 | 1 | - | - |
| 42 | 1730 | 6/23 | 41°58'N | 135°04'W | 59.5 | 350 | 11 | 59.1 | 53.0 | 1026 | 03 | 6, 8 | 4 | 9 | 3 | 350 | 4 | 32.97 | 0.43 |
| 43 | 2330 | 6/23 | 41°10'N | 135°04'W | 61.5 | 350 | 09 | 60.0 | 54.0 | 1026 | 01 | 6 | 6 | 9 | 3 | 340 | 1 | - | - |
| 44 | 0530 | 6/24 | 40°33'N | 135°04'W | 61.0 | 300 | 06 | 60.5 | 55.0 | 1026 | 03 | 6, 5 | 4 | 8 | 3 | 340 | 1 | 33.33 | 0.58 |
| 45 | 1130 | 6/24 | 39°48'N | 135°01'W | 62.5 | 410 | 11 | 60.8 | 54.5 | 1028 | 00 | 8 | 4 | 5 | 3 | XX | X | - | - |
| 46 | 1730 | 6/24 | 38°59'N | 134°59'W | 63.5 | 050 | 11 | 60.5 | 55.0 | 1030 | 03 | 8 | 8 | 8 | 2 | 090 | 1 | 33.60 | 0.27 |
| 47 | 2330 | 6/24 | 39°20'N | 134°57'W | 62.5 | 040 | 06 | 66.4 | 59.0 | 1026 | 01 | 6 | 6 | 8 | 2 | 350 | 1 | - | - |
| 48 | 0530 | 6/25 | 39°56'N | 134°58'W | 63.0 | 030 | 05 | 59.8 | 55.0 | 1026 | 01 | 6, 8, 1 | 2 | 7 | 1 | 300 | 2 | 33.66 | - |
| 49 | 1500 | 6/25 | 39°58'N | 134°52'W | 62.5 | 110 | 02 | 63.0 | 58.0 | 1024 | 02 | 6 | 2 | 8 | 1 | 140 | 1 | 33.48 | 0.59 |
| 50 | 2330 | 6/25 | 38°55'N | 134°50'W | 65.8 | 350 | 07 | 66.8 | 59.8 | 1024 | 01 | 8 | 4 | 9 | 1 | 090 | 2 | - | - |
| 51 | 0500 | 6/26 | 38°30'N | 134°35'W | 64.8 | 350 | 07 | 64.0 | 59.0 | 1024 | 02 | 8 | 5 | 9 | 2 | 350 | 1 | 33.69 | - |
| 52 | 1500 | 6/26 | 38°30'N | 134°32'W | 64.0 | 150 | 08 | 63.2 | 59.2 | 1023 | 02 | 8, 6 | 6 | 9 | 2 | 170 | 3 | 33.77 | 0.55 |
| 53 | 2330 | 6/26 | 37°36'N | 134°00'W | 65.5 | 350 | 10 | 67.0 | 62.0 | 1026 | 02 | 8, 6 | 2 | 9 | 2 | 010 | 1 | - | - |
| 54 | 0530 | 6/27 | 36°50'N | 133°52'W | 65.5 | 320 | 08 | 65.0 | 63.0 | 1024 | 03 | 6 | 6 | 8 | 2 | 350 | 1 | 33.80 | 0.54 |
| 55 | 1530 | 6/27 | 36°44'N | 133°48'W | 65.5 | 330 | 08 | 67.5 | 65.5 | 1023 | 03 | 6 | 8 | 8 | 2 | 350 | 1 | - | - |
| 56 | 2330 | 6/27 | 35°49'N | 133°47'W | 66.5 | 350 | 11 | 69.0 | 66.5 | 1022 | 02 | 6 | 7 | 8 | 2 | 350 | 1 | 33.80 | - |
| 57 | 0530 | 6/28 | 35°01'N | 133°43'W | 68.1 | 340 | 13 | 66.8 | 65.5 | 1021 | 45 | 9 | 9 | 1 | 4 | 340 | 4 | 33.89 | 0.29 |
| 58 | 1130 | 6/28 | 34°14'N | 133°39'W | 66.5 | 340 | 14 | 66.0 | 65.0 | 1020 | 01 | 6 | 3 | 8 | 2 | 340 | 1 | - | - |
| 59 | 1730 | 6/28 | 33°25'N | 133°36'W | 67.5 | 350 | 23 | 68.5 | 66.0 | 1021 | 20 | 6, 8 | 6 | 8 | 4 | 010 | 3 | 34.14 | 0.36 |
| 60 | 2330 | 6/28 | 32°38'N | 133°31'W | 68.1 | 200 | 15 | 69.5 | 69.5 | 1020 | 03 | 6 | 6 | 6 | 4 | 040 | 4 | - | - |
| 61 | 0530 | 6/29 | 31°58'N | 133°28'W | 67.5 | 040 | 25 | 64.0 | 67.7 | 1020 | 20 | 6 | 8 | 7 | 4 | 040 | 4 | 34.00 | 0.33 |
| 62 | 1130 | 6/29 | 31°12'N | 133°25'W | 66.0 | 070 | 14 | 68.5 | 63.5 | 1019 | 02 | 6 | 8 | 7 | 4 | 090 | 3 | - | - |
| 63 | 1730 | 6/29 | 31°13'N | 132°57'W | 66.8 | 170 | 19 | 66.0 | 61.0 | 1020 | 02 | 6 | 8 | 7 | 5 | 000 | 3 | 33.93 | 0.37 |
| 64 | 2330 | 6/29 | 31°33'N | 132°17'W | 67.0 | 050 | 18 | 67.0 | 62.0 | 1020 | 02 | 6 | 8 | 7 | 5 | 040 | 3 | - | - |
| 65 | 0530 | 6/30 | 31°53'N | 131°37'W | 66.0 | 050 | 18 | 66.0 | 61.5 | 1021 | 02 | 6 | 8 | 6 | 4 | 040 | 3 | 33.82 | 0.29 |
| 66 | 1130 | 6/30 | 32°14'N | 130°58'W | 65.9 | 050 | 18 | 65.0 | 60.2 | 1020 | 02 | X | X | 6 | 5 | XX | 4 | - | - |
| 67 | 1730 | 6/30 | 32°35'N | 130°19'W | 65.5 | 050 | 18 | 65.0 | 59.0 | 1022 | 02 | 6 | 8 | 7 | 5 | 040 | 4 | 33.86 | 0.42 |
| 68 | 2330 | 6/30 | 32°55'N | 129°38'W | 65.5 | 010 | 18 | 64.5 | 59.5 | 1021 | 02 | 6 | 8 | 7 | 5 | 020 | 4 | - | - |
| 69 | 0530 | 7/1 | 33°14'N | 128°57'W | 64.2 | 330 | 15 | 64.5 | 59.5 | 1022 | 02 | 6, 8 | 8 | 6 | 5 | 350 | 5 | 33.24 | 0.45 |
| 70 | 1130 | 7/1 | 33°34'N | 128°14'W | 63.0 | 340 | 18 | 63.0 | 57.0 | 1021 | 02 | 6, 8 | 8 | 7 | 5 | 360 | 4 | - | - |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 71 | 1730 | 7/1 | 33°53'N | 127°31'W | 62.5 | 350 | 18 | 63.0 | 58.5 | 1022 | 02 | 6 | 6 | 8 | 5 | 350 | 4 | 33.46 | 0.38 |
| 72 | 2330 | 7/1 | 34°15'N | 126°47'W | 63.5 | 310 | 19 | 64.2 | 61.3 | 1021 | 01 | 1,6,8 | 3 | 9 | 4 | 020 | 4 | - | - |
| 73 | 0530 | 7/2 | 34°25'N | 126°26'W | 63.3 | 350 | 14 | 63.5 | 58.5 | 1021 | 01 | 1,6,8 | 3 | 9 | 3 | 350 | 1 | 33.24 | 0.43 |
| 74 | 1450 | 7/2 | 34°26'N | 126°32'W | 63.0 | 320 | 18 | 62.0 | 58.0 | 1021 | 02 | 1,6,8,4 | 5 | 9 | 3 | 010 | 2 | - | 1.08 |
| 75 | 1730 | 7/2 | 34°35'N | 126°10'W | 62.5 | 320 | 18 | 62.5 | 58.0 | 1021 | 01 | 6,8 | 4 | 9 | 3 | 010 | 2 | 33.21 | 0.89 |
| 76 | 2330 | 7/2 | 34°48'N | 125°32'W | 61.5 | 340 | 18 | 63.5 | 59.0 | 1021 | 02 | 6,8 | 3 | 9 | 3 | 010 | 2 | - | - |
| 77 | 0530 | 7/3 | 34°58'N | 125°15'W | 61.5 | 320 | 16 | 61.5 | 59.0 | 1020 | 02 | 6,8 | 3 | 9 | 5 | 310 | 3 | 33.48 | 0.47 |
| 78 | 1130 | 7/3 | 34°56'N | 126°18'W | 61.6 | 020 | 20 | 61.5 | 57.8 | 1021 | 02 | 6,8 | 3 | 5 | 5 | 350 | 4 | - | - |
| 79 | 1730 | 7/3 | 34°56'N | 127°06'W | 62.5 | 340 | 17 | 64.0 | 59.5 | 1024 | 02 | 6,8 | 3 | 8 | 4 | 010 | 4 | 33.04 | 0.39 |
| 80 | 2330 | 7/3 | 34°56'N | 127°59'W | 64.0 | 020 | 20 | 65.0 | 61.0 | 1024 | 03 | 6,8 | 7 | 8 | 5 | 000 | 4 | - | - |
| 81 | 0530 | 7/4 | 34°57'N | 128°52'W | 63.1 | 000 | 23 | 63.0 | 59.0 | 1024 | 01 | 6 | 5 | 7 | 5 | 000 | 4 | 33.75 | 0.37 |
| 82 | 1130 | 7/4 | 34°60'N | 129°47'W | 64.5 | 320 | 20 | 64.0 | 58.0 | 1023 | 02 | 6 | 7 | 7 | 4 | 010 | 4 | - | - |
| 83 | 1130 | 7/4 | 35°02'N | 130°41'W | 64.5 | 350 | 20 | 64.0 | 58.5 | 1024 | 02 | 6,4 | 7 | 7 | 5 | 010 | 4 | 33.66 | 0.36 |
| 84 | 2330 | 7/4 | 35°05'N | 131°37'W | 64.4 | 330 | 18 | 64.5 | 60.2 | 1023 | 02 | 6,4 | 7 | 7 | 5 | 010 | 4 | - | - |
| 85 | 0530 | 7/5 | 35°08'N | 132°23'W | 65.5 | 350 | 14 | 64.0 | 58.5 | 1024 | 02 | 6,8 | 8 | 7 | 4 | 020 | 4 | 33.89 | - |
| 86 | 1130 | 7/5 | 35°32'N | 131°46'W | 65.0 | 350 | 16 | 63.5 | 59.0 | 1022 | 02 | 6 | 8 | 7 | 4 | 010 | 4 | - | - |
| 87 | 1730 | 7/5 | 35°59'N | 131°05'W | 64.0 | 330 | 15 | 63.5 | 61.0 | 1022 | 46 | 6,4 | 9 | 3 | 4 | 000 | 4 | 33.40 | 0.29 |
| 88 | 2330 | 7/5 | 36°23'N | 130°33'W | 64.5 | 360 | 14 | 64.0 | 61.0 | 1021 | 01 | 6,8 | 5 | 8 | 3 | 010 | 4 | - | - |
| 89 | 0530 | 7/6 | 36°36'N | 130°12'W | 63.5 | 310 | 08 | 62.5 | 61.0 | 1022 | 03 | 0,6 | 6 | 5 | 3 | 350 | 1 | 33.15 | 0.55 |
| 90 | 1530 | 7/6 | 36°42'N | 130°14'W | 62.6 | 350 | 17 | 62.5 | 61.0 | 1023 | 00 | 0,6 | 7 | 6 | 3 | 350 | 1 | 33.08 | 0.74 |
| 91 | 1730 | 7/6 | 36°50'N | 129°59'W | 63.0 | 350 | 13 | 62.7 | 60.0 | 1023 | 01 | 8 | 5 | 9 | 2 | 350 | 1 | 33.06 | - |
| 92 | 2330 | 7/6 | 37°09'N | 129°26'W | 63.5 | 330 | 18 | 64.0 | 61.0 | 1023 | 03 | 6 | 8 | X | X | 340 | X | - | - |
| 93 | 0355 | 7/6 | 37°20'N | 129°10'W | 63.0 | 340 | 09 | 63.5 | 59.0 | 1023 | 02 | 6 | 7 | 8 | 3 | 200 | 1 | 33.37 | 0.61 |
| 94 | 1800 | 7/7 | 37°27'N | 129°03'W | 63.0 | 350 | 10 | 64.5 | 61.0 | 1024 | 01 | 8 | 2 | 8 | 3 | 000 | 1 | 33.37 | 0.56 |
| 95 | 2330 | 7/7 | 37°47'N | 128°32'W | 62.0 | 350 | 11 | 64.5 | 61.0 | 1023 | 02 | X | 0 | 9 | 3 | 020 | 1 | - | - |
| 96 | 0530 | 7/8 | 38°10'N | 127°03'W | 62.0 | 350 | 10 | 62.5 | 57.0 | 1023 | 02 | X | 0 | 9 | 3 | 000 | 1 | 32.99 | 0.24 |
| 97 | 1130 | 7/8 | 38°34'N | 127°22'W | 61.5 | 350 | 13 | 63.5 | 60.0 | 1022 | 02 | X | 0 | 9 | 3 | 000 | 1 | - | - |
| 98 | 1730 | 7/8 | 38°58'N | 126°49'W | 61.9 | 320 | 15 | 63.3 | 60.0 | 1022 | 02 | 8 | 6 | 9 | 3 | 000 | 1 | 32.94 | 0.36 |
| 99 | 2330 | 7/8 | 39°22'N | 126°17'W | 61.5 | 340 | 15 | 62.5 | 59.5 | 1021 | 02 | 2 | 8 | 9 | 3 | 000 | 4 | - | - |
| 100 | 0530 | 7/9 | 39°37'N | 125°34'W | 59.5 | 350 | 18 | 62.0 | 59.5 | 1020 | 02 | 0 | 0 | 9 | 3 | 000 | 3 | 33.08 | - |
| 101 | 1130 | 7/9 | 39°59'N | 124°54'W | 52.5 | 000 | 14 | 57.5 | 55.0 | 1020 | 02 | 0 | 0 | 7 | 3 | 000 | 1 | - | - |
| 102 | 1730 | 7/9 | 39°59'N | 125°46'W | 61.5 | 330 | 12 | 63.5 | 62.0 | 1021 | 02 | 8 | 5 | 8 | 3 | 310 | 1 | 33.01 | 0.36 |
| 103 | 2330 | 7/9 | 39°59'N | 126°38'W | 62.0 | 330 | 09 | 62.5 | 60.0 | 1021 | 02 | 6 | 1 | 8 | 3 | 330 | 1 | - | - |
| 104 | 0355 | 7/10 | 39°60'N | 126°51'W | 62.4 | 310 | 08 | 64.7 | 61.5 | 1020 | 02 | 8 | 1 | 9 | 2 | 310 | 1 | 32.99 | 0.45 |
| 105 | 1500 | 7/10 | 40°03'N | 126°54'W | 62.5 | 300 | 12 | 65.0 | 63.0 | 1018 | 03 | 6 | 8 | 7 | 3 | 310 | 1 | - | 0.45 |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 106 | 1730 | 7/10 | 40°02'N | 127°07'W | 62.5 | 300 | 12 | 65.5 | 63.0 | 1018 | 02 | 6 | 8 | 7 | 3 | 310 | 1 | 32.99 | - |
| 107 | 2330 | 7/10 | 40°02'N | 127°50'W | 62.2 | 280 | 15 | 64.2 | 60.2 | 1018 | 01 | 6 | 6 | 8 | 5 | 250 | 3 | - | - |
| 108 | 0530 | 7/11 | 40°20'N | 128°33'W | 63.0 | 280 | 15 | 63.0 | 59.0 | 1021 | 02 | 6 | 5 | 8 | 4 | 250 | 3 | 32.92 | 0.46 |
| 109 | 1130 | 7/11 | 40°03'N | 129°20'W | 62.0 | 340 | 13 | 63.0 | 59.5 | 1023 | 02 | 6 | 6 | 8 | 4 | 340 | 4 | - | - |
| 110 | 1730 | 7/11 | 40°04'N | 130°06'W | 62.5 | 050 | 06 | 65.0 | 58.2 | 1024 | 02 | 1,4,6 | 6 | 9 | 3 | 360 | 5 | 33.08 | 0.51 |
| 111 | 2330 | 7/11 | 40°08'N | 131°07'W | 64.0 | 100 | 07 | 68.5 | 60.0 | 1023 | 02 | 1,4,6 | 3 | 9 | 2 | 340 | 1 | - | - |
| 112 | 0530 | 7/12 | 40°11'N | 131°50'W | 63.3 | 150 | 10 | 64.0 | 60.0 | 1020 | 02 | 6,1 | 2 | 9 | 3 | 170 | 1 | 33.12 | 0.39 |
| 113 | 1130 | 7/12 | 40°01'N | 132°36'W | 63.0 | 140 | 20 | 65.0 | 62.3 | 1015 | 00 | 6 | 8 | 8 | 2 | 090 | 2 | - | - |
| 114 | 1730 | 7/12 | 39°52'N | 133°22'W | 63.5 | 240 | 10 | 65.0 | 63.0 | 1009 | 21 | 6 | 8 | 7 | 3 | 240 | 3 | 33.12 | 0.36 |
| 115 | 2330 | 7/12 | 40°17'N | 132°43'W | 63.0 | 180 | 13 | 66.0 | 64.0 | 1008 | 02 | 6 | 8 | 7 | 4 | 210 | 4 | - | - |
| 116 | 0530 | 7/13 | 40°35'N | 132°13'W | 62.5 | 240 | 11 | 64.3 | 62.0 | 1006 | 03 | 6 | 6 | 7 | 5 | 230 | 4 | 33.15 | 0.68 |
| 117 | 1130 | 7/13 | 41°05'N | 131°29'W | 62.5 | 240 | 16 | 62.5 | 60.5 | 1005 | 02 | 1,6,8 | 6 | 7 | 3 | 230 | 2 | - | - |
| 118 | 1730 | 7/13 | 41°31'N | 130°44'W | 62.0 | 250 | 05 | 64.0 | 60.5 | 1005 | 02 | 5,6,8 | 4 | 8 | 4 | 220 | 1 | 32.88 | 0.96 |
| 119 | 2330 | 7/13 | 41°59'N | 129°58'W | 62.5 | 240 | 14 | 64.2 | 61.0 | 1007 | 02 | 6,8 | 6 | 8 | 3 | 240 | 2 | - | - |
| 120 | 0530 | 7/14 | 42°22'N | 129°21'W | 61.5 | 300 | 18 | 61.0 | 58.0 | 1009 | 03 | 6,8 | 8 | 8 | 3 | 240 | 2 | 32.84 | 0.38 |
| 121 | 1730 | 7/14 | 42°39'N | 128°42'W | 61.8 | 290 | 17 | 62.0 | 58.0 | 1016 | 01 | 6 | 6 | 8 | 6 | 240 | 5 | 32.88 | 0.52 |
| 122 | 2330 | 7/14 | 43°04'N | 128°09'W | 62.5 | 290 | 21 | 62.5 | 58.0 | 1020 | 02 | 6,8 | 5 | 8 | 5 | 260 | 4 | - | - |
| 123 | 0530 | 7/15 | 43°22'N | 127°50'W | 62.0 | 280 | 06 | 62.0 | 57.0 | 1023 | 02 | 6,8 | 5 | 8 | 5 | 260 | 5 | 32.39 | 0.48 |
| 124 | 1130 | 7/15 | 43°49'N | 127°07'W | 60.0 | 290 | 16 | 59.1 | 55.1 | 1022 | 02 | 6,8 | 4 | 7 | 3 | 260 | 4 | - | - |
| 125 | 1730 | 7/15 | 44°16'N | 126°45'W | 62.0 | 320 | 14 | 60.0 | 56.0 | 1023 | 02 | 8 | 2 | 9 | 3 | 350 | 1 | 32.34 | 0.38 |
| 126 | 2330 | 7/15 | 44°50'N | 126°15'W | 63.0 | 330 | 12 | 65.0 | 63.5 | 1026 | 02 | 8,4,5 | 5 | 9 | 3 | 260 | 1 | - | - |
| 127 | 0530 | 7/16 | 45°23'N | 125°39'W | 62.0 | 340 | 13 | 61.5 | 58.0 | 1023 | 02 | 6,8 | 3 | 7 | 3 | 020 | 1 | 30.77 | 0.45 |
| 128 | 1130 | 7/16 | 45°45'N | 124°42'W | 62.5 | 340 | 15 | 60.0 | 55.0 | 1022 | 02 | 6,8 | 4 | 8 | 3 | 010 | 1 | - | - |
| 129 | 0530 | 7/23 | 45°22'N | 125°11'W | 62.5 | 330 | 01 | 63.5 | 61.5 | 1019 | 02 | 6 | 6 | 8 | 3 | 330 | 1 | 31.49 | 0.45 |
| 130 | 1130 | 7/23 | 44°49'N | 125°59'W | 62.5 | 340 | 09 | 62.0 | 60.0 | 1021 | 50 | 6 | 6 | 7 | 1 | 280 | 1 | - | - |
| 131 | 1730 | 7/23 | 44°18'N | 126°43'W | 63.0 | 340 | 08 | 61.0 | 58.5 | 1023 | 21 | 6 | 9 | 6 | 2 | 300 | 1 | 30.39 | 0.39 |
| 132 | 2330 | 7/23 | 43°51'N | 127°22'W | 62.5 | 320 | 11 | 63.5 | 61.5 | 1025 | 01 | 6 | 6 | 8 | 3 | 320 | 1 | 32.84 | 0.63 |
| 133 | 0530 | 7/24 | 43°42'N | 127°53'W | 61.5 | 340 | 09 | 60.5 | 56.0 | 1025 | 02 | 8 | 3 | 8 | 3 | 340 | 1 | 32.92 | 0.74 |
| 134 | 1130 | 7/24 | 43°42'N | 127°53'W | 62.0 | 320 | 15 | 62.5 | 56.5 | 1024 | 02 | 8 | 3 | 8 | 2 | 340 | 1 | 32.54 | 0.46 |
| 135 | 1530 | 7/24 | 43°43'N | 127°51'W | 61.5 | 330 | 12 | 61.0 | 57.0 | 1024 | 02 | 8,4,6 | 5 | 8 | 2 | 340 | 1 | 32.70 | 0.55 |
| 136 | 2330 | 7/24 | 43°14'N | 127°12'W | 63.1 | 330 | 12 | 63.0 | 57.5 | 1022 | 02 | 8 | 3 | 9 | 3 | 330 | 2 | - | - |
| 137 | 0530 | 7/25 | 42°51'N | 127°51'W | 62.0 | 330 | 14 | 62.0 | 57.0 | 1021 | 02 | 8,1 | 3 | 9 | 3 | 340 | 2 | 32.61 | 0.64 |
| 138 | 1130 | 7/25 | 42°29'N | 128°32'W | XXX | 210 | 13 | 62.0 | 58.5 | 1011 | 02 | 8 | 2 | 9 | 3 | 330 | 1 | 33.04 | 1.07 |
| 139 | 1730 | 7/25 | 42°06'N | 129°12'W | 61.9 | 320 | 15 | 62.5 | 59.2 | 1020 | 03 | 8,6,4 | 6 | 9 | 3 | 300 | 2 | 32.94 | 0.61 |
| 140 | 2330 | 7/25 | 41°38'N | 129°55'W | 62.5 | 320 | 21 | 62.5 | 58.5 | 1021 | 03 | 6,8 | 6 | 8 | 4 | 300 | 2 | 33.10 | 0.90 |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 141 | 0530 | 7/26 | 41°13'N | 130°27'W | 62.0 | 300 | 21 | 61.5 | 56.5 | 1024 | 03 | 6 | 8 | 8 | 5 | 300 | 4 | 33.01 | 0.61 |
| 142 | 1130 | 7/26 | 40°28'N | 130°45'W | 62.0 | 000 | 18 | 62.5 | 55.0 | 1024 | 02 | 6 | 2 | 7 | 5 | 000 | 4 | 32.99 | 0.55 |
| 143 | 1730 | 7/26 | 40°52'N | 131°10'W | 62.0 | 000 | 21 | 61.0 | 55.5 | 1025 | 02 | 6 | 7 | 5 | 5 | 000 | 4 | 32.99 | 2.20 |
| 144 | 2330 | 7/26 | 40°03'N | 131°19'W | 63.0 | 330 | 18 | 64.0 | 58.5 | 1025 | 02 | 6,8 | 3 | 8 | 5 | 330 | 4 | 33.15 | - |
| 145 | 0530 | 7/27 | 39°39'N | 131°16'W | 62.5 | 000 | 16 | 63.0 | 59.0 | 1025 | 01 | 6 | 6 | 7 | 5 | 000 | 4 | 33.13 | 0.53 |
| 146 | 1130 | 7/27 | 38°51'N | 131°11'W | 63.0 | 000 | 14 | 62.5 | 58.5 | 1025 | 02 | 6 | 7 | 8 | 4 | 000 | 4 | 32.26 | 0.69 |
| 147 | 1730 | 7/27 | 38°18'N | 130°53'W | 68.5 | 320 | 17 | 63.0 | 60.5 | 1024 | 18 | 6 | 7 | 8 | 5 | 000 | 4 | - | 0.38 |
| 148 | 2330 | 7/27 | 38°26'N | 130°17'W | 64.0 | 310 | 11 | 65.0 | 62.2 | 1023 | 01 | 6 | 6 | 7 | 3 | 350 | 3 | 33.10 | 0.42 |
| 149 | 0530 | 7/28 | 38°35'N | 129°41'W | 63.5 | 030 | 16 | 63.5 | 61.0 | 1022 | 02 | 6 | 8 | 7 | 4 | 030 | 3 | 33.04 | 0.30 |
| 150 | 1130 | 7/28 | 38°43'N | 129°04'W | 62.0 | 330 | 10 | 63.0 | 61.0 | 1019 | 01 | 6 | 2 | 7 | 5 | 010 | 3 | 33.15 | - |
| 151 | 1730 | 7/28 | 38°47'N | 128°37'W | 62.7 | 330 | 16 | 62.0 | 60.5 | 1020 | 50 | X | 9 | 3 | 5 | 030 | 3 | 33.10 | 0.61 |
| 152 | 2330 | 7/28 | 38°49'N | 128°40'W | 63.0 | 350 | 16 | 63.0 | 60.5 | 1019 | 01 | 8 | 5 | 8 | 4 | 330 | 3 | 33.12 | 0.44 |
| 153 | 0400 | 7/29 | 38°45'N | 128°38'W | 62.5 | 310 | 15 | 64.5 | 61.0 | 1018 | 01 | 8 | 1 | 8 | 3 | 300 | 1 | 33.17 | 0.45 |
| 154 | 1130 | 7/29 | 38°45'N | 128°35'W | 62.5 | 200 | 06 | 64.0 | 62.5 | 1017 | 00 | X | 2 | 6 | 2 | 320 | 1 | 33.19 | 0.53 |
| 155 | 1600 | 7/29 | 38°46'N | 128°37'W | 62.8 | 280 | 03 | 62.7 | 60.5 | 1017 | 02 | 8 | 7 | 8 | 2 | 300 | 1 | 33.10 | 0.47 |
| 156 | 2330 | 7/29 | 38°56'N | 127°51'W | 63.5 | 340 | 11 | 65.0 | 62.0 | 1017 | 03 | 6 | 6 | 8 | 3 | 010 | 1 | 33.19 | 0.63 |
| 157 | 0905 | 7/30 | 39°01'N | 127°32'W | 63.2 | 330 | 08 | 65.0 | 62.2 | 1018 | 01 | 6,8 | 7 | 8 | 2 | 290 | 1 | 33.10 | 0.57 |
| 158 | 1130 | 7/30 | 39°01'N | 127°32'W | 62.8 | 340 | 17 | 63.0 | 58.0 | 1019 | 02 | 8 | 7 | 8 | 3 | 300 | 1 | 32.99 | 0.44 |
| 159 | 1700 | 7/30 | 39°03'N | 127°33'W | 62.0 | 010 | 12 | 63.5 | 58.0 | 1021 | 02 | 6 | 8 | 8 | 3 | 320 | 1 | 33.06 | 0.52 |
| 160 | 2400 | 7/30 | 39°01'N | 127°22'W | 62.8 | 320 | 12 | 63.0 | 58.0 | 1020 | 02 | 6 | 6 | 9 | 3 | 320 | 1 | 33.37 | 0.67 |
| 161 | 0530 | 7/31 | 39°00'N | 127°27'W | 62.2 | 340 | 20 | 62.0 | 57.5 | 1020 | 02 | 6 | 2 | 9 | 3 | 340 | 1 | 33.15 | 0.61 |
| 162 | 1230 | 7/31 | 39°00'N | 127°26'W | 62.0 | 330 | 16 | 62.5 | 59.0 | 1020 | 02 | 6 | 3 | 9 | 3 | 320 | 1 | 33.17 | - |
| 163 | 1830 | 7/31 | 38°59'N | 127°28'W | 62.5 | 350 | 14 | 63.0 | 60.0 | 1022 | 02 | 8 | 2 | 9 | 2 | 350 | 1 | 33.10 | 0.89 |
| 164 | 2300 | 7/31 | 38°59'N | 127°28'W | 63.0 | 330 | 12 | 65.0 | 60.0 | 1022 | 02 | 6,8 | 3 | 3 | 3 | 330 | 1 | 33.01 | 0.82 |
| 165 | 2330 | 8/2 | 39°14'N | 127°31'W | 62.0 | 340 | 19 | 64.0 | 60.1 | 1020 | 03 | 6 | 5 | 8 | 6 | 000 | 6 | 33.04 | 1.90 |
| 166 | 0300 | 8/3 | 39°02'N | 127°31'W | 62.6 | 350 | 17 | 63.0 | 60.0 | 1019 | 02 | 6 | 4 | 9 | 5 | 000 | 4 | 33.01 | 1.30 |
| 167 | 1730 | 8/3 | 38°57'N | 127°12'W | 59.8 | 280 | 09 | 64.8 | 61.8 | 1017 | 46 | 2,6 | 8 | 6 | 2 | 310 | 1 | 33.12 | 3.46 |
| 168 | 2330 | 8/3 | 38°54'N | 127°04'W | 59.8 | 290 | 09 | 64.0 | 60.5 | 1016 | 02 | 2,6 | 3 | 7 | 3 | 300 | 1 | 33.35 | 4.92 |
| 169 | 0530 | 8/4 | 38°55'N | 126°30'W | 61.3 | 300 | 11 | 62.0 | 60.0 | 1016 | 36 | 6 | 6 | 7 | 3 | 300 | 1 | 32.95 | 2.32 |
| 170 | 1730 | 8/4 | 38°56'N | 125°42'W | 61.8 | 230 | 09 | 63.0 | 60.5 | 1014 | 02 | 8 | 1 | 9 | 2 | 270 | 1 | 33.21 | 3.94 |
| 171 | 2330 | 8/4 | 38°58'N | 126°11'W | 61.3 | 250 | 11 | 64.0 | 61.0 | 1016 | 03 | 8,4,6,8 | 3 | 9 | 6 | 290 | 8 | - | - |
| 172 | 0530 | 8/5 | 38°50'N | 126°36'W | 60.5 | 270 | 06 | 63.0 | 60.5 | 1016 | 02 | 4 | 2 | 9 | 5 | 300 | 5 | 32.94 | 0.46 |
| 173 | 1130 | 8/5 | 38°31'N | 126°02'W | 61.5 | 270 | 11 | 62.5 | 59.5 | 1015 | 02 | 4 | 1 | 9 | 4 | 300 | 4 | 32.90 | 0.78 |
| 174 | 1730 | 8/5 | 38°15'N | 125°41'W | 55.1 | 310 | 04 | 61.0 | 58.5 | 1017 | 03 | 6 | 1 | 9 | 4 | 340 | 5 | 33.04 | - |
| 175 | 2040 | 8/5 | 38°06'N | 125°25'W | 58.0 | 270 | 07 | 63.0 | 59.2 | 1017 | 01 | 1,2 | 6 | 9 | 5 | 300 | 5 | 33.33 | - |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 176 | 2330 | 8/5 | 38°14'N | 125°44'W | 56.5 | 270 | 09 | 63.0 | 59.5 | 1018 | 02 | 6 | 1 | 9 | 5 | 300 | 5 | 33.00 | 1.16 |
| 177 | 0530 | 8/6 | 38°07'N | 125°48'W | 56.8 | 250 | 11 | 60.5 | 58.0 | 1018 | 03 | 6,8 | 5 | 7 | 4 | 300 | 4 | 33.39 | 2.19 |
| 178 | 1130 | 8/6 | 37°38'N | 125°30'W | 60.0 | 310 | 11 | 62.3 | 60.0 | 1018 | 01 | 6 | 3 | 8 | 3 | 300 | 2 | 33.19 | - |
| 179 | 1730 | 8/6 | 37°07'N | 125°07'W | 60.9 | 330 | 09 | 63.0 | 60.2 | 1019 | 01 | 6 | 7 | 9 | 2 | 350 | 2 | 33.06 | 0.61 |
| 180 | 2005 | 8/6 | 36°59'N | 124°58'W | 59.3 | 320 | 12 | 64.0 | 60.0 | 1019 | 02 | 6 | 7 | 9 | 2 | 350 | 2 | 33.37 | - |
| 181 | 2210 | 8/6 | 36°53'N | 124°48'W | 59.5 | 300 | 06 | 64.5 | 60.5 | 1019 | 02 | 6 | 3 | 9 | 2 | 350 | 2 | - | - |
| 182 | 2330 | 8/6 | 36°45'N | 124°35'W | 60.1 | 300 | 06 | 64.0 | 60.0 | 1019 | 02 | 6 | 1 | 9 | 2 | 350 | 2 | 33.73 | 2.40 |
| 183 | 0400 | 8/7 | 36°45'N | 124°34'W | 59.5 | 300 | 12 | 61.1 | 60.0 | 1018 | 02 | X | 0 | 9 | 2 | 350 | 2 | 33.55 | 1.07 |
| 184 | 1130 | 8/7 | 36°42'N | 124°29'W | 59.0 | 320 | 11 | 60.0 | 60.0 | 1017 | 45 | X | 0 | 1 | 2 | 320 | 2 | 33.49 | 1.04 |
| 185 | 1730 | 8/7 | 36°35'N | 124°18'W | 60.5 | 260 | 06 | 64.0 | 63.0 | 1019 | 28 | 6 | 8 | 5 | 2 | 300 | 1 | 33.49 | 1.93 |
| 186 | 2330 | 8/7 | 36°13'N | 123°38'W | 62.0 | 300 | 04 | 64.5 | 62.0 | 1018 | 03 | 6 | 6 | 6 | 2 | 300 | 1 | 33.51 | 0.82 |
| 187 | 0452 | 8/8 | 36°09'N | 123°29'W | 60.2 | 300 | 10 | 63.0 | 60.1 | 1017 | 40 | 6 | 8 | 8 | 2 | 300 | 2 | 33.62 | 0.91 |
| 188 | 1130 | 8/8 | 36°08'N | 123°24'W | 60.2 | 300 | 08 | 62.0 | 59.5 | 1018 | 02 | 6 | 8 | 8 | 2 | 300 | 2 | 34.22 | - |
| 189 | 1600 | 8/8 | 36°09'N | 123°24'W | 60.5 | 310 | 12 | 62.5 | 59.5 | 1019 | 02 | 6 | 8 | 6 | 2 | 300 | 2 | 33.60 | 0.97 |
| 190 | 2330 | 8/8 | 35°20'N | 123°23'W | 61.5 | 320 | 11 | 64.8 | 61.0 | 1018 | 02 | 4,6 | 5 | 9 | 2 | 320 | 1 | 33.60 | 0.45 |
| 191 | 0530 | 8/9 | 34°48'N | 123°22'W | 61.7 | 310 | 18 | 62.5 | 59.5 | 1017 | 02 | 6 | 1 | 9 | 2 | 300 | 1 | 34.78 | 1.04 |
| 192 | 1730 | 8/9 | 34°47'N | 123°44'W | 61.0 | 320 | 13 | 63.0 | 60.0 | 1017 | 03 | 1,6 | 2 | 9 | 3 | 320 | 1 | 44.04 | 0.50 |
| 193 | 2200 | 8/9 | 34°49'N | 124°10'W | 63.0 | 320 | 16 | 64.8 | 61.0 | 1017 | 02 | 8 | 3 | 9 | 3 | 320 | 1 | 33.12 | 0.50 |
| 194 | 2330 | 8/9 | 34°49'N | 124°10'W | 63.0 | 320 | 20 | 64.2 | 60.5 | 1016 | 02 | 8 | 1 | 9 | 4 | 300 | 1 | 33.19 | 0.58 |
| 195 | 0230 | 8/10 | 34°48'N | 124°11'W | 62.5 | 320 | 21 | 63.0 | 61.0 | 1015 | 03 | 8 | 8 | 7 | 4 | 300 | 4 | 33.26 | 0.64 |
| 196 | 1130 | 8/10 | 34°27'N | 125°13'W | 62.5 | 340 | 22 | 62.0 | 59.5 | 1016 | 02 | 6 | 8 | 7 | 5 | 340 | 4 | 33.33 | - |
| 197 | 1730 | 8/10 | 34°18'N | 126°06'W | 63.8 | 340 | 20 | 70.0 | 60.5 | 1018 | 02 | 8 | 4 | 8 | 4 | 340 | 1 | 33.30 | - |
| 198 | 2330 | 8/10 | 34°12'N | 126°52'W | 65.5 | 000 | 19 | 66.5 | 61.0 | 1017 | 02 | 6,1 | 6 | 8 | 4 | 010 | 1 | 33.40 | 0.41 |
| 199 | 0530 | 8/11 | 34°04'N | 127°37'W | 65.0 | 010 | 17 | 65.0 | 61.2 | 1017 | 02 | 6,8 | 6 | 7 | 4 | 010 | 4 | 33.49 | 0.66 |
| 200 | 1130 | 8/11 | 33°51'N | 128°24'W | 66.5 | 000 | 17 | 65.0 | 61.0 | 1017 | 02 | 6,8 | 4 | 8 | 4 | 000 | 2 | - | - |
| 201 | 1730 | 8/11 | 33°42'N | 129°15'W | 66.0 | 020 | 21 | 67.5 | 63.0 | 1020 | 02 | 6,8 | 8 | 8 | 4 | 000 | 2 | 33.49 | 0.39 |
| 202 | 2330 | 8/11 | 33°33'N | 130°03'W | 66.6 | 000 | 12 | 68.0 | 63.2 | 1020 | 02 | 6 | 8 | 9 | 3 | 000 | 1 | 33.51 | - |
| 203 | 0530 | 8/11 | 33°22'N | 130°52'W | 67.5 | 000 | 12 | 67.5 | 63.2 | 1021 | 02 | 6 | 5 | 8 | 3 | 000 | 1 | - | 1.11 |
| 204 | 1130 | 8/12 | 33°11'N | 131°39'W | 68.0 | 000 | 12 | 64.5 | 64.0 | 1021 | 02 | 6,8 | 6 | 8 | 3 | 000 | 1 | 34.00 | - |
| 205 | 1730 | 8/12 | 33°00'N | 132°28'W | 68.2 | 040 | 16 | 68.5 | 64.0 | 1022 | 02 | 6 | 8 | 9 | 3 | 040 | 1 | 34.52 | 0.32 |
| 206 | 2330 | 8/12 | 32°39'N | 133°07'W | 69.0 | 040 | 12 | 69.0 | 62.7 | 1022 | 02 | 6 | 5 | 9 | 3 | 040 | 1 | 34.76 | 0.56 |
| 207 | 0530 | 8/13 | 32°19'N | 133°59'W | 68.7 | 040 | 12 | 69.5 | 64.0 | 1023 | 02 | 8 | 3 | 9 | 3 | 050 | 1 | 34.20 | 0.45 |
| 208 | 1130 | 8/13 | 32°01'N | 134°50'W | 69.0 | 050 | 13 | 68.5 | 63.5 | 1023 | 02 | 6 | 8 | 8 | 3 | 050 | 1 | 34.52 | - |
| 209 | 1730 | 8/13 | 31°41'N | 135°49'W | 69.8 | 040 | 14 | 70.0 | 62.0 | 1024 | 03 | 6 | 8 | 7 | 3 | 040 | 1 | 36.09 | - |
| 210 | 2330 | 8/13 | 31°23'N | 136°38'W | 70.3 | 040 | 13 | 71.5 | 66.0 | 1022 | 01 | 8,4 | 2 | 8 | 3 | 030 | 1 | 34.90 | - |

Table 4.--Summary of observations at bathythermograph lowerings, John R. Manning cruise 36 (NEPAS) (for coded values see H. O. Pub. 606-c) (cont'd)

| Ser. No. | Time, GCT | Date, 1957 | Latitude | Longitude | Bkt. temp., °F. | Wind | | Air temp. | | Barometer, mb. | Weather | Clouds | | Visibility | Sea | Swell | | Surf. sal., ‰ | Surf. $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Dir., °T. | Force, kt. | Dry bulb, °F. | Wet bulb, °F. | | | Type | Cover | | | Dir. °T. | Amt. | | |
| 211 | 0530 | 8/14 | 31°00'N | 137°31'W | 69.2 | 050 | 14 | 70.2 | 63.1 | 1023 | 02 | 1,4,8 | 5 | 7 | 3 | 040 | 2 | 34.99 | - |
| 212 | 1130 | 8/14 | 30°36'N | 138°22'W | 69.8 | 040 | 17 | 69.8 | 62.6 | 1022 | 02 | 1,6,8 | 5 | 8 | 3 | 040 | 2 | 35.05 | - |
| 213 | 1830 | 8/14 | 30°10'N | 139°22'W | 70.7 | 040 | 09 | 72.0 | 64.5 | 1023 | 02 | 3,8,2 | 6 | 8 | 3 | 040 | 1 | 35.21 | 0.34 |
| 214 | 2330 | 8/14 | 29°51'N | 140°04'W | 71.6 | 040 | 09 | 74.3 | 65.5 | 1021 | 02 | 4,8 | 6 | 9 | 3 | 040 | 2 | 35.12 | - |
| 215 | 0530 | 8/15 | 29°27'N | 140°52'W | 72.5 | 040 | 10 | 71.0 | 64.0 | 1021 | 02 | 4,8 | 6 | 8 | 3 | 040 | 2 | - | - |
| 216 | 1200 | 8/15 | 29°04'N | 141°40'W | 71.5 | 070 | 13 | 69.7 | 64.0 | 1020 | 02 | 6,4 | 6 | 8 | 3 | 040 | 1 | - | - |
| 217 | 1815 | 8/15 | 28°38'N | 142°34'W | 72.2 | 070 | 19 | 72.5 | 65.5 | 1020 | 02 | 4,6,8 | 5 | 9 | 3 | 080 | 4 | 35.41 | 0.25 |
| 218 | 2330 | 8/15 | 28°19'N | 143°16'W | 73.5 | 020 | 16 | 73.0 | 66.0 | 1019 | 02 | 2,6 | 6 | 8 | 3 | 020 | 2 | - | - |
| 219 | 0530 | 8/16 | 27°56'N | 144°04'W | 73.5 | 070 | 17 | 72.5 | 67.5 | 1019 | 02 | 6,5 | 5 | 8 | 3 | 100 | 1 | - | - |
| 220 | 1130 | 8/16 | 27°29'N | 144°48'W | 74.8 | 080 | 13 | 71.2 | 67.0 | 1020 | 03 | 8 | 2 | 8 | 3 | 340 | 2 | - | - |
| 221 | 1830 | 8/16 | 26°50'N | 145°32'W | 73.0 | 080 | 14 | 73.0 | 67.5 | 1021 | 02 | 8 | 4 | 8 | 3 | 320 | 2 | - | - |
| 222 | 2330 | 8/16 | 26°36'N | 146°17'W | 73.5 | 070 | 12 | 74.5 | 68.0 | 1020 | 02 | 8,5,1 | 2 | 8 | 3 | 100 | 1 | - | - |
| 223 | 0530 | 8/17 | 26°12'N | 147°07'W | 74.6 | 100 | 14 | 73.5 | 69.2 | 1020 | 02 | 8 | 6 | 7 | 3 | 100 | 2 | - | - |
| 224 | 1130 | 8/17 | 25°52'N | 147°58'W | 74.0 | 090 | 12 | 73.5 | 67.0 | 1020 | 02 | 8 | 5 | 8 | 3 | 090 | 2 | - | - |
| 225 | 1130 | 8/17 | 25°32'N | 148°50'W | 74.3 | 070 | 16 | 75.3 | 68.0 | 1022 | 02 | 6,8,5 | 5 | 8 | 4 | 070 | 3 | - | - |
| 226 | 2330 | 8/17 | 25°11'N | 149°41'W | 75.4 | 070 | 17 | 78.8 | 71.0 | 1021 | 02 | 6,8 | 6 | 9 | 4 | 080 | 3 | - | - |
| 227 | 0530 | 8/18 | 24°47'N | 150°29'W | 75.0 | 080 | 20 | 74.5 | 70.0 | 1021 | 02 | 8,4 | 5 | 8 | 3 | 080 | 2 | - | - |
| 228 | 1130 | 8/18 | 24°23'N | 151°19'W | 75.0 | 070 | 17 | 74.5 | 70.5 | 1021 | 01 | 8 | 2 | 8 | 4 | 010 | 1 | - | - |
| 229 | 1730 | 8/18 | 24°01'N | 152°08'W | 75.9 | 070 | 15 | 75.8 | 71.0 | 1020 | 02 | 1,6,8 | 6 | 9 | 3 | 070 | 4 | - | - |
| 230 | 2330 | 8/18 | 23°39'N | 152°56'W | 77.5 | 070 | 18 | 78.2 | 72.8 | 1019 | 02 | 8,6 | 3 | 8 | 3 | 070 | 4 | - | - |
| 231 | 0530 | 8/19 | 23°13'N | 153°42'W | 76.0 | 070 | 21 | 76.5 | 72.0 | 1018 | 18 | 6 | 6 | 8 | 4 | 070 | 4 | - | - |
| 232 | 1130 | 8/19 | 22°51'N | 154°30'W | 77.0 | 070 | 18 | 75.5 | 72.2 | 1018 | 02 | 1,6 | 2 | 7 | 4 | 070 | 4 | - | - |
| 233 | 1730 | 8/19 | 22°29'N | 155°18'W | 77.0 | 070 | 21 | 78.4 | 71.5 | 1018 | 02 | 8,6 | 3 | 7 | 4 | 070 | 4 | - | - |
| 234 | 2330 | 8/19 | 22°07'N | 156°07'W | 78.0 | 070 | 23 | 77.5 | 73.0 | 1018 | 02 | 6,8 | 6 | 7 | 4 | 070 | 4 | - | - |
| 235 | 0530 | 8/20 | 21°40'N | 156°54'W | 77.4 | 090 | 19 | 78.0 | 73.0 | 1016 | 03 | 6,8,1,4 | 6 | 7 | 5 | 100 | 4 | - | - |

Table 5.--Weather observations (USWB 1210-F), Hugh M. Smith cruise 40 (NEPAS)[1/]

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 7/3 | 22.6°N | 156.6°W | 0000 | 99 | 02 | 19 | 02 | 2 | 1019.6 | 6 | 1.0 | 77.9 | 71.9 | 76.7 | 5 | 5 | 4 | 5 | 0 | 0 | 04 | 3 | 5 |
| 7/3 | 23.2°N | 156.3°W | 0600 | 99 | 06 | 22 | 02 | 2 | 1020.7 | 2 | 1.4 | 76.8 | 70.3 | 76.3 | 8 | 8 | 4 | 5 | X | X | XX | X | X |
| 7/3 | 23.6°N | 156.0°W | 1200 | 99 | 07 | 18 | 61 | X | 1019.3 | 8 | 1.4 | 75.5 | 72.1 | 78.0 | X | X | X | X | X | X | XX | X | X |
| 7/3 | 24.0°N | 155.5°W | 1800 | 99 | 06 | 17 | 02 | 1 | 1020.7 | 2 | 2.4 | 77.2 | 72.8 | 76.8 | 2 | 2 | 1 | 5 | 0 | 0 | 06 | 3 | 2 |
| 7/4 | 24.6°N | 154.8°W | 0000 | 99 | 06 | 14 | 60 | 0 | 1019.3 | 7 | 0.7 | 78.8 | 72.2 | 76.0 | 3 | 2 | 2 | 5 | 0 | 0 | 06 | 2 | 2 |
| 7/4 | 25.2°N | 154.1°W | 0600 | 99 | 08 | 16 | 02 | 0 | 1020.3 | 2 | 1.7 | 76.7 | 71.3 | 75.8 | 3 | 3 | 2 | 5 | 0 | 0 | 06 | 2 | 2 |
| 7/4 | 25.9°N | 153.4°W | 1200 | 99 | 09 | 15 | 02 | X | 1020.7 | 7 | 1.4 | 75.4 | 70.6 | 75.8 | X | X | X | X | X | X | XX | X | X |
| 7/4 | 26.6°N | 152.7°W | 1800 | 99 | 07 | 11 | 02 | 0 | 1023.0 | 2 | 1.4 | 75.3 | 70.8 | 74.8 | 2 | 1 | 2 | 4 | 7 | 0 | 09 | 3 | 2 |
| 7/5 | 26.8°N | 152.5°W | 0000 | 99 | 08 | 14 | 02 | 0 | 1022.7 | 2 | 0.3 | 78.6 | 71.8 | 75.6 | 3 | 2 | 1 | 4 | 7 | 8 | 04 | 3 | 2 |
| 7/5 | 26.4°N | 151.8°W | 0600 | 99 | 09 | 15 | 03 | 1 | 1024.0 | 2 | 2.7 | 76.0 | 71.0 | 75.9 | 4 | 4 | 4 | 4 | 0 | 0 | 07 | 3 | 2 |
| 7/5 | 28.2°N | 151.3°W | 1200 | 99 | 08 | 15 | 50 | 5 | 1024.7 | 7 | 0.3 | 73.9 | 69.2 | 75.1 | X | X | X | X | X | X | XX | X | X |
| 7/5 | 28.9°N | 150.8°W | 1800 | 99 | 07 | 18 | 02 | 1 | 1026.4 | 2 | 2.7 | 73.8 | 69.6 | 74.4 | X | 2 | 1 | 4 | 0 | 0 | 06 | 3 | 3 |
| 7/6 | 29.2°N | 150.5°W | 0000 | 99 | 08 | 14 | 02 | 1 | 1026.2 | 4 | 0.2 | 76.9 | 70.4 | 74.2 | X | 1 | 1 | 4 | 0 | 0 | 08 | 2 | 2 |
| 7/6 | 30.0°N | 150.0°W | 0600 | 99 | 03 | 13 | 50 | 2 | 1026.2 | 2 | 0.3 | 72.8 | 67.2 | 73.8 | 8 | 8 | 4 | 4 | X | X | 07 | 2 | 2 |
| 7/6 | 30.7°N | 149.4°W | 1200 | 98 | 07 | 20 | 00 | 2 | 1025.7 | 7 | 1.0 | 71.8 | 67.6 | 72.9 | 8 | 8 | X | X | X | X | XX | X | X |
| 7/6 | 31.1°N | 149.0°W | 1800 | 99 | 03 | 13 | 02 | 2 | 1026.4 | 2 | 1.7 | 72.5 | 65.3 | 72.7 | 8 | 8 | 8 | 4 | X | X | 03 | 2 | 1 |
| 7/7 | 32.1°N | 148.4°W | 0000 | 99 | 06 | 14 | 02 | 2 | 1026.4 | 6 | 0.3 | 75.5 | 68.4 | 73.5 | 6 | 5 | 4 | 3 | 2 | 0 | 06 | 3 | 2 |
| 7/7 | 32.8°N | 147.8°W | 0600 | 99 | 08 | 07 | 01 | 1 | 1026.4 | 2 | 0.3 | 72.7 | 68.3 | 73.0 | 2 | 2 | 2 | 4 | 0 | 0 | 05 | 2 | 2 |
| 7/7 | 33.6°N | 147.2°W | 1100 | 98 | 06 | 07 | 01 | 1 | 1025.7 | 8 | 1.0 | 70.2 | 65.6 | 71.6 | 2 | X | X | X | X | X | XX | X | X |
| 7/7 | 34.3°N | 146.6°W | 1800 | 99 | 02 | 08 | 03 | 0 | 1026.1 | 1 | 1.0 | 70.0 | 65.8 | 70.9 | 3 | 3 | 2 | 4 | 0 | 0 | 03 | 3 | 1 |
| 7/8 | 35.1°N | 146.1°W | 0000 | 99 | 03 | 01 | 02 | 0 | 1025.1 | 8 | 1.0 | 74.4 | 65 6 | 75.3 | 1 | 1 | 4 | 5 | 0 | 0 | 02 | 2 | 0 |
| 7/8 | 35.8°N | 145.6°W | 0600 | 99 | 25 | 09 | 03 | 0 | 1024.7 | 3 | 0.2 | 71.3 | 66.8 | 71.3 | 2 | 2 | 4 | 4 | 0 | 0 | XX | X | X |
| 7/8 | 36.8°N | 144.9°W | 1200 | 99 | 26 | 15 | 02 | 0 | 1024.0 | 7 | 1.0 | 69.8 | 67.7 | 69.0 | 2 | 2 | 2 | 4 | 0 | 0 | XX | X | X |
| 7/8 | 37.2°N | 144.5°W | 1800 | 99 | 27 | 10 | 02 | 0 | 1023.4 | 2 | 0 7 | 68.7 | 66.6 | 68.3 | 2 | 1 | 1 | 4 | 0 | 5 | 29 | 2 | 2 |
| 7/9 | 38.2°N | 143.9°W | 0000 | 99 | 21 | 13 | 03 | 0 | 1022.0 | 7 | 1.4 | 71.6 | 68.8 | 66.9 | 3 | 1 | 1 | 4 | 7 | 5 | 23 | 2 | 1 |
| 7/9 | 38.8°N | 143.1°W | 0600 | 96 | 25 | 23 | 63 | 1 | 1018.6 | 7 | 1.0 | 68.1 | 67.0 | 66.0 | 8 | 8 | 7 | 4 | X | X | 26 | 5 | 2 |
| 7/9 | 39.7°N | 142.7°W | 1200 | 97 | 26 | 23 | 63 | 6 | 1015.6 | 6 | 1.7 | 66.8 | 65.2 | 64.5 | X | X | X | X | X | X | 27 | 5 | 2 |
| 7/9 | 40.2°N | 142.5°W | 1800 | 99 | 26 | 16 | 01 | 2 | 1014.9 | 4 | 0.0 | 63.4 | 62.2 | 63.3 | 7 | 6 | 6 | 4 | 7 | 0 | 24 | 3 | 3 |
| 7/10 | 40.7°N | 142.0°W | 0000 | 98 | 03 | 25 | 15 | 5 | 1016.6 | 1 | 1.7 | 61.7 | 58.9 | 62.1 | 8 | 8 | 5 | 4 | 0 | 0 | 01 | 3 | 3 |
| 7/10 | 41.2°N | 141.6°W | 0600 | 99 | 02 | 21 | 01 | 2 | 1020.0 | 2 | 2.7 | 62.3 | 60.0 | 62.4 | 7 | X | X | X | X | X | 02 | 2 | 4 |
| 7/10 | 41.7°N | 141.0°W | 1200 | 98 | 00 | 12 | 01 | 1 | 1021.0 | 8 | 0.7 | 57.5 | 52.2 | 60.2 | 3 | X | X | X | X | X | XX | X | 3 |
| 7/10 | 42.2°N | 140.6°W | 1800 | 99 | 35 | 14 | 02 | 1 | 1022.7 | 1 | 0.9 | 57.8 | 55.1 | 59.0 | 8 | 8 | 5 | 4 | X | X | 01 | 2 | 3 |
| 7/11 | 43.2°N | 139.5°W | 0600 | 99 | 28 | 10 | 03 | 2 | 1022.7 | 2 | 0.3 | 57.5 | 53.6 | 59.2 | 8 | 8 | 6 | 4 | X | X | 33 | 2 | 1 |
| 7/11 | 43.8°N | 138.7°W | 1200 | 98 | 25 | 11 | 02 | 2 | 1020.7 | 7 | 1.4 | 57.7 | 53.5 | 57.8 | 8 | 8 | 6 | 4 | X | X | XX | X | X |
| 7/11 | 44.4°N | 138.2°W | 1800 | 99 | 24 | 11 | 02 | 2 | 1019.0 | 7 | 1.4 | 58.0 | 53.0 | 57.2 | 8 | 8 | 6 | 4 | X | X | 35 | 2 | 1 |
| 7/12 | 44.8°N | 137.7°W | 0000 | 99 | 16 | 14 | 02 | 2 | 1016.9 | 7 | 1.4 | 60.1 | 57.2 | 57.0 | 8 | 8 | 6 | 4 | X | X | 35 | 3 | 3 |
| 7/12 | 45.5°N | 137.0°W | 0600 | 98 | 15 | 14 | 50 | 5 | 1013.5 | 7 | 1.4 | 56.9 | 56.9 | 56.9 | 8 | 8 | 6 | 4 | X | X | XX | X | X |
| 7/12 | 44.4°N | 136.9°W | 1200 | 97 | 08 | 26 | 63 | 6 | 1006.4 | 7 | 3.4 | 57.0 | 57.0 | 57.0 | 8 | 8 | X | X | X | X | XX | X | X |

[1/] All columns in USWB 1210-F are not included here. Those deleted are:

| | | | | | |
|---|---|---|---|---|---|
| Column | 2 | Day of week | Column | 23 | Course of ship |
| " | 3 | Octant | " | 24 | Speed of ship |
| " | 13 | Barometer as read | " | 31 | Diff. sea-air, °F. |
| " | 14 | Barometer as corrected | " | 32 | Dew point, °F. |
| " | 17 | Air temperature, °F. | | | |

Table 5.--Weather observations (USWB 1210-F), Hugh M. Smith cruise 40 (NEPAS)(cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 7/12 | 44.3°N | 136.8°W | 1800 | 97 | 09 | 26 | 64 | 6 | 1001.0 | 7 | 2.4 | 57.8 | 57.7 | 57.3 | 8 | 8 | 7 | 4 | X | X | 15 | 2 | 4 |
| 7/13 | 43.8°N | 136.4°W | 0000 | 98 | 24 | 11 | 02 | 5 | 1001.7 | 2 | 0.4 | 59.1 | 58.5 | 58.7 | 8 | 8 | 5 | 4 | X | X | 18 | 2 | 3 |
| 7/13 | 43.1°N | 136.2°W | 0600 | 99 | 31 | 06 | 03 | 5 | 1002.4 | 2 | 1.0 | 61.3 | 58.9 | 59.3 | 8 | 8 | 5 | 4 | X | X | XX | X | X |
| 7/13 | 42.3°N | 135.9°W | 1200 | 98 | 29 | 10 | 02 | 6 | 1004.1 | 2 | 0.7 | 61.2 | 58.2 | 60.2 | 8 | 8 | 5 | 4 | X | X | XX | X | X |
| 7/13 | 41.7°N | 135.4°W | 1800 | 99 | 32 | 22 | 01 | 2 | 1008.5 | 2 | 2.4 | 62.4 | 57.7 | 61.1 | 8 | 8 | 5 | 4 | X | X | 32 | 3 | 4 |
| 7/14 | 40.9°N | 134.9°W | 0000 | 99 | 34 | 21 | 01 | 2 | 1011.9 | 2 | 1.7 | 62.8 | 58.0 | 62.7 | 5 | 8 | 5 | 4 | X | X | 33 | 3 | 4 |
| 7/14 | 40.6°N | 134.7°W | 0600 | 99 | 29 | 17 | 02 | 1 | 1015.9 | 2 | 2.0 | 61.8 | 59.2 | 62.7 | 4 | 4 | 4 | 4 | 0 | 0 | 31 | 4 | 5 |
| 7/14 | 40.2°N | 134.2°W | 1200 | 99 | 30 | 06 | 02 | 1 | 1018.3 | 2 | 0.7 | 64.2 | 59.8 | 62.9 | 2 | 2 | 4 | 4 | 0 | 0 | XX | X | X |
| 7/14 | 40.5°N | 133.6°W | 1900 | 99 | 32 | 09 | 03 | 1 | 1022.0 | 2 | 2.0 | 62.1 | 59.8 | 62.6 | 8 | 8 | 4 | 4 | X | X | 08 | 3 | 2 |
| 7/15 | 41.0°N | 133.1°W | 0000 | 99 | 31 | 09 | 01 | 2 | 1024.0 | 2 | 1.0 | 62.3 | 56.6 | 62.3 | 7 | 7 | 4 | 4 | 0 | 0 | 31 | 2 | 2 |
| 7/15 | 41.3°N | 133.0°W | 0600 | 99 | 28 | 10 | 02 | 2 | 1025.4 | 2 | 1.0 | 60.0 | 58.8 | 61.8 | 7 | 7 | 4 | 4 | 0 | 0 | 28 | 2 | 2 |
| 7/15 | 42.2°N | 132.1°W | 1200 | 99 | 31 | 19 | 00 | X | 1026.1 | 6 | 0.5 | 60.6 | 59.2 | 61.2 | X | X | X | X | X | X | XX | X | X |
| 7/15 | 42.9°N | 131.8°W | 1800 | 99 | 29 | 09 | 02 | 2 | 1027.4 | 2 | 1.0 | 58.7 | 55.4 | 60.8 | 8 | 8 | 4 | 4 | X | X | 31 | 2 | 2 |
| 7/16 | 43.4°N | 131.3°W | 0000 | 99 | 33 | 18 | 02 | 2 | 1027.8 | 7 | 0.3 | 60.0 | 58.1 | 60.5 | 5 | 5 | 4 | 4 | 0 | 0 | 34 | 2 | 2 |
| 7/16 | 43.7°N | 131.0°W | 0600 | 99 | 35 | 16 | 02 | 2 | 1028.1 | 2 | 1.0 | 59.4 | 58.2 | 59.8 | 4 | 4 | 4 | 4 | 0 | 0 | XX | X | X |
| 7/16 | 44.3°N | 130.5°W | 1200 | 99 | 35 | 16 | 01 | 1 | 1028.1 | 4 | 0.0 | 57.9 | 56.1 | 58.9 | 3 | 3 | 2 | 4 | 0 | 0 | XX | X | X |
| 7/16 | 44.6°N | 130.2°W | 1800 | 99 | 36 | 20 | 03 | 1 | 1029.1 | 2 | 0.7 | 58.9 | 57.1 | 58.6 | 8 | 7 | 4 | 4 | 6 | 0 | 36 | 2 | 2 |
| 7/17 | 45.0°N | 129.8°W | 0000 | 99 | 29 | 26 | 01 | 2 | 1029.1 | 8 | 1.0 | 59.3 | 51.4 | 58.8 | 5 | 3 | 2 | 4 | 6 | 0 | 30 | 2 | 1 |
| 7/17 | 45.2°N | 129.2°W | 0600 | 99 | 34 | 24 | 02 | 2 | 1028.8 | 2 | 0.3 | 58.8 | 57.6 | 60.2 | 6 | 6 | 2 | 4 | 0 | 0 | 34 | 2 | 3 |
| 7/17 | 45.5°N | 128.3°W | 1200 | 99 | 35 | 18 | 02 | 2 | 1026.8 | 6 | 0.3 | 58.2 | 57.0 | 61.0 | 8 | 8 | 4 | 3 | X | X | 35 | 2 | 3 |
| 7/17 | 45.7°N | 127.4°W | 1900 | 99 | 33 | 19 | 02 | 2 | 1025.1 | 8 | 1.0 | 59.7 | 56.4 | 61.3 | 7 | 5 | 2 | 4 | 6 | 0 | 35 | 2 | 3 |
| 7/18 | 45.8°N | 126.6°W | 0000 | 99 | 34 | 20 | 01 | 2 | 1023.0 | 7 | 1.4 | 60.2 | 57.3 | 60.1 | 7 | 6 | 2 | 4 | 6 | 0 | 34 | 2 | 4 |
| 7/18 | 45.8°N | 126.1°W | 0600 | 99 | 34 | 19 | 01 | 2 | 1021.3 | 8 | 1.0 | 60.7 | 58.3 | 61.7 | 4 | 4 | 2 | 4 | 0 | 0 | 34 | 2 | 4 |
| 7/18 | 46.3°N | 125.5°W | 1200 | 99 | 32 | 20 | 01 | 2 | 1019.0 | 7 | 0.7 | 59.9 | 58.0 | 60.5 | 3 | 3 | 4 | 4 | 0 | 0 | 34 | 2 | 4 |
| 7/22 | 47.0°N | 125.8°W | 1800 | 98 | 21 | 06 | 02 | 2 | 1016.9 | 1 | 0.7 | 59.4 | 56.2 | 61.1 | 8 | 8 | 5 | 3 | X | X | 33 | 2 | 1 |
| 7/23 | 47.0°N | 126.6°W | 0000 | 99 | 25 | 13 | 02 | 2 | 1016.6 | 3 | 0.3 | 62.8 | 60.3 | 61.8 | 6 | 5 | 5 | 3 | 0 | 0 | 31 | 2 | 1 |
| 7/23 | 47.0°N | 127.0°W | 0600 | 99 | 28 | 15 | 02 | X | 1019.0 | 2 | 2.0 | 60.5 | 57.2 | 61.2 | X | X | X | X | X | X | XX | X | X |
| 7/23 | 47.0°N | 127.1°W | 1200 | 99 | 28 | 05 | 01 | 5 | 1022.7 | 2 | 1.4 | 60.2 | 59.1 | 60.9 | 6 | 5 | 2 | 3 | 0 | 1 | 28 | 2 | 1 |
| 7/23 | 47.0°N | 127.8°W | 1900 | 99 | 27 | 09 | 01 | 1 | 1024.7 | 2 | 1.7 | 62.0 | 58.8 | 61.2 | 3 | 2 | 2 | 3 | 0 | 0 | 27 | 2 | 1 |
| 7/24 | 47.0°N | 128.3°W | 0000 | 99 | 27 | 07 | 01 | 0 | 1025.7 | 1 | 0.7 | 61.7 | 60.2 | 60.3 | 2 | 2 | 2 | 4 | 0 | 0 | 27 | 3 | 2 |
| 7/24 | 47.0°N | 128.9°W | 0600 | 99 | 27 | 04 | 01 | 1 | 1025.7 | 0 | 0.2 | 59.0 | 58.5 | 59.2 | 3 | 1 | 1 | 4 | 2 | 0 | 27 | 3 | 1 |
| 7/24 | 47.0°N | 129.1°W | 1200 | 99 | 27 | 10 | 01 | 1 | 1025.4 | 4 | 0.0 | 59.0 | 56.8 | 58.8 | 3 | 2 | 1 | 4 | X | X | 27 | 3 | 1 |
| 7/24 | 46.9°N | 130.0°W | 1800 | 99 | 25 | 10 | 02 | 1 | 1024.7 | 6 | 0.3 | 60.3 | 59.7 | 58.7 | 8 | 8 | 6 | 4 | X | X | 26 | 3 | 2 |
| 7/25 | 46.7°N | 130.7°W | 0000 | 99 | 24 | 12 | 02 | 2 | 1023.7 | 7 | 0.7 | 60.0 | 58.5 | 59.0 | 8 | 4 | 8 | 5 | 3 | X | 28 | 3 | 2 |
| 7/25 | 46.8°N | 131.1°W | 0600 | 99 | 20 | 13 | 02 | X | 1020.0 | 6 | 0.4 | 61.8 | 60.2 | 59.0 | X | X | X | X | X | X | XX | X | X |
| 7/25 | 46.8°N | 131.1°W | 1300 | 99 | 28 | 19 | 02 | 2 | 1017.6 | 5 | 1.0 | 59.1 | 58.3 | 58.7 | 5 | 5 | 2 | 4 | 0 | 0 | 28 | 2 | 3 |
| 7/25 | 46.8°N | 131.8°W | 1800 | 99 | 30 | 20 | 02 | 2 | 1020.3 | 1 | 1.4 | 59.9 | 57.0 | 58.1 | 6 | 4 | 2 | 4 | 5 | 0 | 28 | 3 | 3 |
| 7/26 | 46.8°N | 132.8°W | 0000 | 99 | 28 | 26 | 03 | 1 | 1022.4 | 2 | 0.7 | 59.8 | 56.2 | 58.5 | 6 | 4 | 2 | 4 | 5 | 0 | 28 | 3 | 3 |
| 7/26 | 46.9°N | 133.2°W | 0600 | 99 | 28 | 10 | 01 | 2 | 1022.4 | 1 | 0.5 | 57.8 | 55.0 | 57.7 | 5 | 5 | 2 | 4 | 5 | 0 | 28 | 2 | 3 |
| 7/26 | 47.0°N | 134.0°W | 1200 | 97 | 26 | 20 | XX | 2 | 1021.7 | 6 | 0.3 | 55.0 | 54.2 | 57.3 | 8 | 8 | 7 | 4 | X | X | 26 | 2 | 3 |
| 7/26 | 46.6°N | 133.5°W | 1900 | 97 | 16 | 24 | XX | 6 | 1018.6 | 4 | 0.0 | 60.0 | 59.5 | 57.9 | 8 | 8 | 7 | 4 | X | X | 23 | 2 | 3 |
| 7/27 | 46.5°N | 132.5°W | 0000 | 97 | 24 | 26 | 52 | 6 | 1018.0 | 6 | 0.3 | 62.1 | 62.1 | 59.4 | 8 | 8 | 7 | 4 | X | X | 24 | 2 | 3 |
| 7/27 | 46.2°N | 131.8°W | 0600 | 96 | 25 | 20 | 65 | 6 | 1018.3 | 2 | 0.7 | 60.2 | 60.2 | 58.2 | 8 | 8 | X | 0 | X | X | XX | X | X |
| 7/27 | 46.2°N | 130.4°W | 1800 | 97 | 25 | 16 | 42 | 4 | 1018.3 | 3 | 0.2 | 61.8 | 60.5 | 59.0 | 7 | 7 | X | 0 | X | X | 27 | 4 | 4 |
| 7/28 | 46.1°N | 129.8°W | 0000 | 98 | 22 | 14 | 03 | 2 | 1018.6 | 1 | 0.2 | 63.8 | 63.2 | 60.3 | 8 | 8 | 6 | 3 | X | X | 26 | 4 | 4 |
| 7/28 | 46.0°N | 129.1°W | 0600 | 96 | 22 | 18 | 45 | 4 | 1018.6 | 3 | 0.2 | 62.0 | 62.0 | 60.4 | 9 | X | X | 0 | X | X | 25 | 4 | 3 |
| 7/28 | 46.0°N | 129.0°W | 1200 | 97 | 23 | 20 | 45 | 4 | 1015.6 | 6 | 1.0 | 62.6 | 62.2 | 60.3 | 9 | X | X | 0 | X | X | 23 | 2 | 2 |
| 7/28 | 46.0°N | 127.8°W | 1800 | 97 | 22 | 18 | 45 | 4 | 1015.9 | 4 | 0.0 | 63.0 | 63.0 | 61.0 | 9 | X | X | 0 | X | X | 26 | 3 | 3 |
| 7/29 | 45.7°N | 127.2°W | 0000 | 96 | 24 | 11 | XX | X | 1015.9 | 2 | 0.7 | 63.2 | 63.2 | 62.5 | 9 | 8 | 6 | X | X | X | 26 | 3 | 3 |
| 7/29 | 45.2°N | 126.8°W | 0600 | 97 | 33 | 10 | 20 | 5 | 1017.3 | 2 | 0.7 | 62.0 | 62.0 | 63.2 | 8 | 8 | 6 | 2 | X | X | 26 | 3 | 3 |

Table 5.--Weather observations (USWB 1210-F), Hugh M. Smith cruise 40 (NEPAS)(cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 7/29 | 45.3°N | 127.0°W | 1200 | 97 | 33 | 12 | 00 | 2 | 1017.3 | 4 | 0.0 | 61.1 | 59.8 | 63.0 | 8 | 8 | 6 | 2 | X | X | 26 | 3 | 2 |
| 7/29 | 44.5°N | 126.1°W | 1800 | 99 | 35 | 15 | 03 | 1 | 1018.0 | 2 | 0.3 | 63.4 | 62.0 | 64.6 | 5 | 5 | 6 | 2 | 0 | 0 | 26 | 3 | 2 |
| 7/30 | 44.1°N | 125.6°W | 0000 | 99 | 34 | 15 | 03 | 2 | 1018.3 | 4 | 0.0 | 64.3 | 60.3 | 64.4 | 7 | 6 | 6 | 4 | 6 | 0 | 28 | 3 | 3 |
| 7/30 | 44.0°N | 125.3°W | 0600 | 99 | 33 | 17 | 02 | 2 | 1018.3 | 1 | 0.5 | 62.6 | 61.0 | 60.8 | 7 | 7 | 2 | X | X | X | 28 | 2 | 2 |
| 7/30 | 43.7°N | 125.5°W | 1300 | 99 | 33 | 07 | 02 | 2 | 1018.0 | 3 | 0.0 | 61.5 | 60.8 | 60.2 | 4 | 4 | 2 | 2 | X | X | 28 | 2 | 2 |
| 7/30 | 43.5°N | 125.7°W | 1800 | 99 | 35 | 08 | 01 | 0 | 1019.6 | 1 | 0.7 | 67.1 | 63.8 | 59.0 | 2 | 1 | 1 | 5 | 8 | 0 | 29 | 3 | 2 |
| 7/31 | 43.3°N | 126.3°W | 0000 | 99 | 33 | 12 | 03 | 0 | 1020.7 | 4 | 0.0 | 65.1 | 62.5 | 64.3 | 4 | 3 | 2 | 5 | 1 | 0 | 33 | 3 | 2 |
| 7/31 | 43.0°N | 126.8°W | 0600 | 99 | 33 | 14 | 02 | 0 | 1021.3 | 3 | 0.7 | 62.9 | 60.7 | 64.0 | 3 | 3 | 2 | 5 | 0 | 0 | 31 | 3 | 2 |
| 7/31 | 42.7°N | 127.6°W | 1800 | 99 | 35 | 18 | 02 | 1 | 1023.7 | 2 | 1.4 | 66.3 | 62.9 | 63.5 | 6 | 5 | 2 | 4 | 2 | 0 | 34 | 2 | 2 |
| 8/1 | 42.4°N | 128.5°W | 0000 | 99 | 34 | 14 | 03 | 0 | 1024.7 | 2 | 0.3 | 64.7 | 62.5 | 63.6 | 2 | 2 | 2 | 3 | X | X | 34 | 3 | 1 |
| 8/1 | 42.3°N | 129.0°W | 0600 | 99 | 36 | 17 | 02 | 1 | 1026.8 | 2 | 1.7 | 62.5 | 61.0 | 62.6 | 6 | 6 | 2 | 4 | 0 | 0 | 35 | 3 | 1 |
| 8/1 | 42.2°N | 129.1°W | 1200 | 99 | 36 | 14 | 03 | X | 1026.1 | 6 | 0.3 | 63.9 | 61.1 | 62.5 | 6 | 5 | 5 | 5 | 2 | 0 | 36 | 2 | 1 |
| 8/1 | 42.0°N | 129.9°W | 1800 | 99 | 35 | 15 | 02 | 1 | 1027.4 | 2 | 1.0 | 63.8 | 61.8 | 62.7 | 6 | 5 | 5 | 5 | 2 | 0 | 02 | 2 | 1 |
| 8/2 | 41.7°N | 130.5°W | 0000 | 99 | 36 | 13 | 02 | 1 | 1027.4 | 7 | 0.7 | 64.8 | 60.2 | 63.4 | 2 | 2 | 1 | 5 | 0 | 0 | 01 | 2 | 2 |
| 8/2 | 41.6°N | 131.0°W | 0600 | 99 | 33 | 10 | 02 | 1 | 1027.8 | 3 | 0.3 | 62.8 | 60.2 | 63.2 | 6 | 6 | 1 | 5 | 0 | 0 | 01 | 2 | 2 |
| 8/2 | 41.5°N | 130.7°W | 1300 | 99 | 32 | 11 | 02 | 1 | 1026.1 | 7 | 1.0 | 62.6 | 61.3 | 63.0 | 1 | 1 | X | 5 | X | X | 01 | 2 | 2 |
| 8/2 | 41.4°N | 129.7°W | 1800 | 99 | 32 | 10 | 02 | 0 | 1025.4 | 4 | 0.0 | 63.3 | 60.8 | 62.8 | 2 | 2 | 2 | 5 | 0 | 0 | 02 | 2 | 1 |
| 8/3 | 41.3°N | 129.0°W | 0000 | 99 | 28 | 14 | 03 | 0 | 1022.7 | 6 | 1.5 | 63.9 | 61.0 | 63.8 | 8 | 8 | 5 | 4 | X | X | 01 | 2 | 1 |
| 8/3 | 41.3°N | 128.4°W | 0600 | 99 | 28 | 12 | 02 | 2 | 1020.7 | 7 | 1.4 | 63.0 | 61.9 | 63.0 | 8 | 8 | 5 | 4 | X | X | 34 | 2 | 1 |
| 8/3 | 41.3°N | 128.2°W | 1300 | 97 | 23 | 16 | 51 | 2 | 1014.9 | 6 | 1.4 | 65.7 | 65.7 | 62.7 | 9 | 9 | X | 0 | X | X | 22 | 2 | 1 |
| 8/3 | 41.2°N | 127.0°W | 1800 | 99 | 29 | 18 | 03 | 2 | 1015.6 | 4 | 0.0 | 64.0 | 62.1 | 62.6 | 7 | 7 | 5 | 4 | 0 | 0 | 26 | 3 | 2 |
| 8/4 | 41.1°N | 126.7°W | 0000 | 99 | 26 | 12 | 02 | 2 | 1014.9 | 7 | 0.7 | 66.2 | 63.8 | 59.6 | 2 | 2 | 5 | 4 | X | X | 26 | 3 | 2 |
| 8/4 | 41.0°N | 126.0°W | 0600 | 97 | 24 | 10 | 02 | 1 | 1014.2 | 2 | 0.3 | 64.9 | 63.3 | 60.3 | 9 | X | X | X | X | X | XX | X | X |
| 8/4 | 40.8°N | 125.7°W | 1300 | 99 | 22 | 10 | 00 | X | 1012.9 | 5 | 0.3 | 61.7 | 61.3 | 59.6 | 2 | 1 | 3 | X | 0 | 4 | 28 | 3 | 2 |
| 8/5 | 40.6°N | 125.6°W | 0000 | 99 | 20 | 13 | 01 | 6 | 1013.9 | 7 | 0.7 | 61.4 | 59.8 | 60.4 | 2 | 2 | 2 | 5 | 6 | 0 | 28 | 3 | 5 |
| 8/5 | 40.5°N | 126.1°W | 0600 | 99 | 22 | 12 | 00 | X | 1014.6 | 1 | 1.0 | 61.3 | 60.1 | 59.7 | X | X | X | X | X | X | XX | X | X |
| 8/5 | 40.3°N | 126.4°W | 1300 | 98 | 23 | 11 | 00 | X | 1014.6 | 4 | 0.0 | 61.9 | 60.4 | 59.7 | X | X | X | X | X | X | XX | X | X |
| 8/5 | 40.2°N | 127.3°W | 1800 | 99 | 30 | 13 | 02 | 2 | 1016.9 | 2 | 1.4 | 60.9 | 59.6 | 59.6 | 6 | 4 | 2 | 5 | 7 | 0 | 29 | 5 | 4 |
| 8/6 | 40.2°N | 127.7°W | 0000 | 99 | 31 | 15 | 02 | 2 | 1018.0 | 5 | 0.0 | 64.9 | 60.9 | 63.1 | 7 | 4 | 4 | 4 | 7 | 0 | 29 | 3 | 4 |
| 8/6 | 40.2°N | 127.0°W | 0600 | 99 | 32 | 14 | 02 | 2 | 1019.3 | 1 | 1.0 | 63.5 | 61.0 | 63.1 | 8 | X | X | X | X | X | 31 | 3 | 3 |
| 8/6 | 39.9°N | 128.5°W | 1300 | 98 | 24 | 10 | 50 | 5 | 1018.3 | 7 | 0.3 | 62.4 | 60.7 | 63.3 | 8 | 8 | 6 | 4 | X | X | 29 | 2 | 2 |
| 8/6 | 39.8°N | 129.4°W | 1900 | 97 | 27 | 10 | 15 | 5 | 1018.6 | 4 | 0.0 | 64.2 | 62.9 | 63.5 | 8 | 8 | 7 | 3 | X | X | 28 | 2 | 2 |
| 8/7 | 39.7°N | 129.9°W | 0000 | 97 | 30 | 15 | 02 | 2 | 1019.0 | 4 | 0.0 | 67.8 | 63.4 | 63.8 | 7 | 7 | 7 | 3 | 0 | 0 | 28 | 2 | 2 |
| 8/7 | 39.5°N | 130.6°W | 0600 | 98 | 30 | 15 | 02 | 2 | 1019.3 | 2 | 0.7 | 65.4 | 62.8 | 64.4 | X | X | X | X | X | X | XX | X | X |
| 8/7 | 39.5°N | 131.0°W | 1200 | 97 | 30 | 14 | 00 | 6 | 1019.3 | 4 | 0.0 | 63.6 | 60.2 | 63.9 | X | X | X | X | X | X | XX | X | X |
| 8/7 | 39.4°N | 130.1°W | 1900 | 98 | 30 | 11 | 02 | 2 | 1020.0 | 2 | 0.7 | 65.8 | 62.7 | 63.9 | 8 | 8 | 7 | 3 | X | X | 33 | 2 | 2 |
| 8/8 | 39.2°N | 129.2°W | 0000 | 99 | 35 | 04 | 01 | 5 | 1020.0 | 6 | 0.3 | 67.1 | 64.2 | 64.0 | 6 | 5 | 2 | 4 | 0 | 9 | 29 | 2 | 2 |
| 8/8 | 39.2°N | 128.8°W | 0600 | 99 | 31 | 14 | 02 | 2 | 1020.3 | 3 | 0.7 | 64.3 | 62.5 | 63.9 | 4 | 4 | 2 | 4 | 0 | 0 | XX | X | X |
| 8/8 | 39.1°N | 128.7°W | 1300 | 98 | 00 | 05 | 02 | 2 | 1020.3 | 4 | 0.0 | 63.0 | 59.8 | 63.6 | X | X | X | X | X | X | XX | X | X |
| 8/8 | 40.0°N | 127.7°W | 1800 | 99 | 31 | 10 | 02 | 5 | 1021.7 | 2 | 1.0 | 63.7 | 62.0 | 63.7 | 7 | 7 | 2 | 4 | 0 | 0 | 32 | 2 | 1 |
| 8/9 | 39.0°N | 127.4°W | 0100 | 99 | 35 | 09 | 01 | 1 | 1021.0 | 7 | 1.0 | 64.8 | 60.8 | 64.2 | 2 | 2 | 2 | 4 | 0 | 0 | 32 | 2 | 1 |
| 8/9 | 39.0°N | 126.9°W | 0700 | 99 | 33 | 08 | 02 | 0 | 1020.3 | 8 | 0.3 | 63.0 | 59.8 | 61.7 | 1 | X | X | X | X | X | 33 | 3 | 2 |
| 8/9 | 39.0°N | 127.0°W | 1200 | 99 | 29 | 10 | 02 | 1 | 1018.6 | 7 | 0.7 | 62.6 | 59.3 | 62.3 | 8 | 8 | 6 | 4 | X | X | 29 | 2 | 2 |
| 8/9 | 39.0°N | 126.2°W | 1800 | 99 | 36 | 13 | 28 | 2 | 1019.0 | 3 | 0.5 | 61.5 | 59.9 | 62.7 | 8 | 8 | 6 | 4 | X | X | 32 | 2 | 2 |
| 8/10 | 39.1°N | 125.3°W | 0000 | 99 | 31 | 15 | 01 | 1 | 1018.3 | 7 | 1.0 | 64.2 | 62.2 | 62.8 | 2 | 2 | 6 | 4 | 0 | 0 | 34 | 2 | 2 |
| 8/10 | 38.9°N | 124.4°W | 0600 | 98 | 30 | 15 | 00 | X | 1016.6 | 8 | 0.5 | 59.2 | 57.4 | 56.2 | X | X | X | X | X | X | XX | X | X |
| 8/10 | 38.9°N | 124.2°W | 1200 | 99 | 33 | 18 | 02 | 0 | 1014.9 | 6 | 1.4 | 58.9 | 57.1 | 56.1 | 1 | 1 | 1 | 4 | 0 | 0 | 33 | 2 | 2 |
| 8/10 | 38.7°N | 125.3°W | 1900 | 99 | 31 | 16 | 02 | 0 | 1016.6 | 2 | 0.3 | 64.8 | 60.2 | 57.6 | 1 | 1 | 1 | 4 | 0 | 0 | 33 | 2 | 2 |
| 8/11 | 38.5°N | 125.5°W | 0000 | 99 | 34 | 20 | 03 | 0 | 1016.6 | 6 | 0.3 | 64.1 | 59.9 | 62.6 | 5 | 5 | 1 | 4 | 0 | 0 | 32 | 2 | 3 |
| 8/11 | 38.4°N | 126.1°W | 0600 | 99 | 33 | 22 | 02 | 1 | 1017.3 | 0 | 0.7 | 62.8 | 59.2 | 62.7 | 2 | 2 | 1 | 4 | 0 | 0 | 33 | 2 | 4 |

Table 5. -- Weather observations (USWB 1210-F), Hugh M. Smith cruise 40 (NEPAS)(cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 8/11 | 38.4°N | 126.8°W | 1300 | 99 | 02 | 16 | 02 | 0 | 1017.3 | 2 | 0.3 | 63.8 | 60.3 | 61.2 | 3 | 3 | 1 | 4 | 0 | 0 | 32 | 2 | 4 |
| 8/11 | 38.2°N | 127.6°W | 1800 | 99 | 36 | 12 | 02 | 0 | 1019.3 | 1 | 0.7 | 65.3 | 61.7 | 63.8 | 3 | 3 | 1 | 4 | 0 | 0 | 36 | 2 | 2 |
| 8/12 | 37.9°N | 128.3°W | 0000 | 99 | 34 | 15 | 02 | 0 | 1020.7 | 6 | 0.2 | 64.9 | 60.8 | 64.0 | 3 | 2 | 2 | 4 | 0 | 1 | 34 | 2 | 2 |
| 8/12 | 37.8°N | 129.0°W | 0600 | 99 | 33 | 15 | 02 | 0 | 1022.0 | 1 | 1.7 | 63.8 | 59.8 | 64.1 | 2 | 2 | 4 | 4 | 0 | 0 | 31 | 2 | 2 |
| 8/12 | 37.5°N | 129.1°W | 1200 | 99 | 34 | 15 | 02 | 1 | 1023.0 | 2 | 0.3 | 65.3 | 61.1 | 65.4 | 8 | 8 | 6 | 4 | X | X | XX | X | X |
| 8/12 | 37.4°N | 129.7°W | 1800 | 99 | 36 | 13 | 02 | 2 | 1024.4 | 1 | 0.2 | 65.0 | 59.9 | 65.1 | 8 | 8 | 5 | 3 | X | X | 36 | 2 | 0 |
| 8/13 | 37.1°N | 128.9°W | 0000 | 99 | 35 | 14 | 02 | 2 | 1023.4 | 7 | 1.0 | 66.4 | 62.0 | 64.3 | 8 | 8 | 5 | 3 | X | X | 36 | 2 | 0 |
| 8/13 | 37.2°N | 128.5°W | 0600 | 99 | 36 | 24 | 02 | 2 | 1024.0 | 2 | 1.0 | 64.3 | 60.0 | 64.2 | 8 | 8 | 6 | 4 | X | X | XX | X | X |
| 8/13 | 37.0°N | 128.2°W | 1300 | 99 | 35 | 17 | 02 | 2 | 1022.7 | 7 | 0.5 | 64.7 | 59.0 | 64.2 | 8 | 8 | 6 | 4 | X | X | XX | X | X |
| 8/13 | 37.1°N | 127.6°W | 1900 | 99 | 02 | 29 | 02 | 2 | 1022.7 | 0 | 0.3 | 64.4 | 60.4 | 63.8 | 8 | 8 | 6 | 4 | X | X | 36 | 2 | 2 |
| 8/14 | 37.0°N | 127.1°W | 0000 | 99 | 35 | 21 | 01 | 1 | 1021.0 | 7 | 1.4 | 63.7 | 60.3 | 63.4 | 1 | 1 | 1 | 4 | 0 | 0 | 36 | 2 | 3 |
| 8/14 | 36.9°N | 126.6°W | 0600 | 99 | 33 | 20 | 02 | 0 | 1020.3 | 1 | 0.3 | 62.9 | 60.8 | 63.4 | 1 | 1 | 1 | 4 | 0 | 0 | XX | X | X |
| 8/14 | 36.8°N | 125.3°W | 1300 | 99 | 32 | 20 | 02 | 1 | 1018.6 | 7 | 0.7 | 62.8 | 58.0 | 62.8 | 7 | 7 | 1 | 4 | 0 | 0 | XX | X | X |
| 8/14 | 37.0°N | 125.6°W | 1900 | 99 | 33 | 19 | 02 | 2 | 1019.3 | 0 | 0.0 | 63.1 | 59.6 | 62.6 | 6 | 6 | 1 | 4 | 0 | 0 | 01 | 2 | 4 |
| 8/15 | 37.1°N | 125.2°W | 0100 | 99 | 34 | 16 | 02 | 1 | 1016.6 | 7 | 1.4 | 62.8 | 59.5 | 60.3 | 0 | 0 | 0 | 9 | 0 | 0 | 35 | 2 | 3 |
| 8/15 | 38.5°N | 125.9°W | 0600 | 99 | 32 | 17 | 02 | 0 | 1017.6 | 0 | 0.3 | 61.1 | 59.2 | 59.8 | 0 | 0 | 0 | 9 | 0 | 0 | XX | X | X |
| 8/15 | 37.5°N | 123.5°W | 1200 | 98 | 32 | 23 | 00 | X | 1015.9 | 0 | 0.0 | 58.3 | 56.4 | 57.9 | X | X | X | X | X | X | XX | X | X |
| 8/27 | 36.8°N | 122.4°W | 0600 | 98 | 32 | 15 | 00 | 1 | 1020.3 | 1 | 0.7 | 58.1 | 56.3 | 59.4 | X | X | X | X | X | X | XX | X | X |
| 8/27 | 35.5°N | 122.1°W | 1200 | 98 | 32 | 18 | 00 | 0 | 1019.6 | 5 | 0.0 | 59.8 | 57.0 | 56.5 | X | X | X | X | X | X | XX | X | X |
| 8/27 | 35.4°N | 123.0°W | 1800 | 98 | 35 | 24 | 03 | 1 | 1022.0 | 2 | 1.7 | 61.5 | 58.2 | 58.2 | 6 | 0 | 0 | 9 | 7 | 1 | 35 | 3 | 3 |
| 8/28 | 35.0°N | 123.4°W | 0000 | 98 | 36 | 22 | 01 | 1 | 1020.7 | 7 | 1.7 | 64.8 | 60.6 | 62.5 | 1 | 1 | 4 | 3 | 0 | 0 | 34 | 3 | 3 |
| 8/28 | 34.5°N | 124.5°W | 0600 | 98 | 34 | 20 | 00 | 1 | 1021.0 | 3 | 0.5 | 63.8 | 59.7 | 64.0 | X | X | X | X | X | X | XX | X | X |
| 8/28 | 34.0°N | 125.7°W | 1300 | 98 | 34 | 20 | 00 | X | 1021.0 | 3 | 0.2 | 64.0 | 58.8 | 64.0 | 2 | X | X | X | X | X | XX | X | X |
| 8/28 | 33.6°N | 126.5°W | 1900 | 99 | 32 | 16 | 02 | 0 | 1021.3 | 0 | 0.3 | 68.3 | 61.8 | 66.1 | 2 | 2 | 2 | 3 | X | X | 32 | 2 | 2 |
| 8/29 | 33.2°N | 128.0°W | 0500 | 99 | 33 | 08 | 02 | X | 1020.3 | 1 | 0.7 | 66.1 | 61.3 | 66.3 | X | X | X | X | X | X | XX | X | X |
| 8/29 | 32.6°N | 129.2°W | 1300 | 99 | 31 | 07 | 00 | X | 1019.3 | 6 | 0.7 | 66.0 | 61.2 | 67.2 | X | X | X | X | X | X | XX | X | X |
| 8/29 | 32.3°N | 129.9°W | 1700 | 99 | 34 | 05 | 03 | 0 | 1020.0 | 2 | 0.7 | 69.0 | 63.0 | 68.3 | 2 | 2 | 4 | 4 | 0 | 0 | 34 | 2 | 0 |
| 8/30 | 32.0°N | 131.0°W | 0100 | 99 | 32 | 04 | 02 | 0 | 1019.0 | 6 | 0.7 | 71.5 | 64.0 | 71.0 | 1 | 1 | 4 | 4 | 0 | 0 | 01 | 2 | 0 |
| 8/30 | 31.9°N | 131.7°W | 0500 | 99 | 27 | 05 | 00 | X | 1020.3 | 3 | 1.0 | 70.5 | 64.0 | 71.1 | X | X | X | X | X | X | XX | X | X |
| 8/30 | 31.2°N | 133.1°W | 1300 | 98 | 27 | 14 | 00 | 1 | 1019.3 | 6 | 0.7 | 72.0 | 67.4 | 70.4 | 8 | X | X | X | X | X | XX | X | X |
| 8/30 | 30.9°N | 133.8°W | 1700 | 99 | 27 | 08 | 03 | 1 | 1021.0 | 2 | 1.2 | 72.0 | 67.6 | 70.2 | 4 | 2 | 2 | 5 | 3 | 1 | 34 | 3 | 0 |
| 8/31 | 30.5°N | 135.0°W | 0100 | 99 | 28 | 12 | 02 | 2 | 1021.0 | 6 | 0.3 | 74.3 | 69.0 | 71.1 | 7 | 2 | 2 | 5 | 7 | 0 | 32 | 3 | 2 |
| 8/31 | 30.6°N | 135.5°W | 0500 | 99 | 28 | 09 | 00 | 1 | 1021.0 | 3 | 0.9 | 72.5 | 68.0 | 71.4 | X | X | X | X | X | X | 32 | 3 | 1 |
| 8/31 | 29.9°N | 136.5°W | 1300 | 99 | 30 | 11 | 00 | X | 1021.7 | 6 | 0.3 | 71.1 | 67.0 | 71.2 | X | X | X | X | X | X | XX | X | X |
| 8/31 | 29.0°N | 138.9°W | 1800 | 99 | 28 | 08 | 03 | 0 | 1023.0 | 2 | 0.9 | 72.9 | 68.4 | 72.3 | 4 | 3 | 4 | 5 | 2 | 0 | 30 | 3 | 1 |
| 9/1 | 28.7°N | 139.6°W | 0600 | 97 | 33 | 07 | 21 | 6 | 1024.0 | 2 | 1.0 | 73.7 | 69.0 | 73.3 | 8 | 8 | X | X | X | X | XX | X | X |
| 9/1 | 28.1°N | 141.0°W | 1300 | 98 | 35 | 06 | 00 | 1 | 1022.4 | 7 | 0.7 | 73.4 | 69.4 | 73.7 | X | X | X | X | X | X | XX | X | X |
| 9/1 | 28.0°N | 141.5°W | 1800 | 99 | 03 | 07 | 03 | 1 | 1023.4 | 2 | 0.9 | 74.9 | 69.1 | 73.2 | 4 | 3 | 2 | 3 | 2 | 0 | 07 | 2 | 1 |
| 9/2 | 27.5°N | 142.7°W | 0100 | 99 | 05 | 10 | 02 | 1 | 1021.3 | 7 | 1.7 | 76.8 | 70.0 | 74.1 | 4 | 3 | 4 | 3 | 2 | 0 | 13 | 3 | 1 |
| 9/2 | 27.2°N | 143.5°W | 0600 | 99 | 05 | 10 | 00 | 1 | 1022.0 | 3 | 0.9 | 74.0 | 69.9 | 74.1 | X | X | X | X | X | X | 13 | 2 | 1 |
| 9/2 | 26.6°N | 144.8°W | 1300 | 99 | 10 | 08 | 00 | 2 | 1020.7 | 7 | 1.2 | 73.8 | 68.4 | 73.7 | 8 | X | X | X | X | X | XX | X | X |
| 9/2 | 26.5°N | 145.0°W | 1800 | 98 | 05 | 05 | 20 | 6 | 1021.7 | 1 | 1.4 | 74.0 | 69.3 | 73.4 | 6 | 4 | 2 | 3 | 1 | 4 | 15 | 2 | 3 |
| 9/3 | 26.0°N | 146.4°W | 0100 | 99 | 25 | 10 | 02 | 1 | 1019.3 | 7 | 1.4 | 75.0 | 69.3 | 75.4 | 5 | 4 | 2 | 3 | 1 | 4 | 10 | 2 | 3 |
| 9/3 | 25.7°N | 147.2°W | 0600 | 99 | 07 | 12 | 00 | X | 1020.0 | 3 | 1.0 | 73.8 | 69.9 | 74.2 | X | X | X | X | X | X | XX | X | X |
| 9/3 | 25.1°N | 148.5°W | 1300 | 98 | 10 | 13 | 00 | X | 1018.6 | 7 | 2.0 | 74.4 | 70.8 | 75.3 | X | X | X | X | X | X | XX | X | X |
| 9/3 | 24.8°N | 149.0°W | 1800 | 96 | 10 | 18 | 14 | 2 | 1019.3 | 2 | 0.9 | 73.8 | 71.3 | 75.5 | 8 | 7 | 7 | 3 | 0 | 1 | 14 | 4 | 3 |
| 9/4 | 24.4°N | 150.1°W | 0100 | 97 | 07 | 09 | 15 | 2 | 1017.6 | 7 | 1.4 | 77.5 | 71.9 | 76.6 | 7 | 5 | 9 | 3 | 2 | 1 | 13 | 4 | 2 |
| 9/4 | 24.0°N | 151.8°W | 0600 | 99 | 10 | 07 | 00 | 2 | 1019.0 | 3 | 1.4 | 75.5 | 71.6 | 76.0 | 6 | X | X | X | X | X | 13 | 4 | 2 |
| 9/4 | 23.7°N | 151.7°W | 1200 | 99 | 10 | 13 | 50 | 2 | 1017.6 | 7 | 1.7 | 72.7 | 71.0 | 75.9 | X | X | X | X | X | X | 13 | 4 | 2 |
| 9/4 | 23.4°N | 152.6°W | 1800 | 98 | 07 | 14 | 15 | X | 1018.0 | 2 | 0.9 | 76.5 | 73.0 | 76.7 | 6 | 4 | 4 | 4 | 0 | 4 | 07 | 3 | 2 |

Table 5.--Weather observations (USWB 1210-F), Hugh M. Smith cruise 40 (NEPAS)(cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 9/4 | 23.1°N | 153.5°W | 2300 | 98 | 04 | 07 | 50 | X | 1016.9 | 7 | 1.7 | 77.0 | 73.3 | 76.8 | 8 | 6 | 4 | 4 | 0 | 4 | 07 | 3 | 2 |
| 9/5 | 22.6°N | 154.5°W | 0600 | 98 | 06 | 07 | 02 | 2 | 1016.6 | 3 | 1.0 | 77.9 | 72.4 | 76.8 | 7 | 6 | X | X | X | X | 06 | 2 | 0 |
| 9/5 | 22.3°N | 155.3°W | 1100 | 98 | 09 | 15 | 20 | 1 | 1015.9 | 8 | 1.2 | 76.4 | 72.4 | 76.9 | 2 | X | X | X | X | X | XX | X | X |
| 9/5 | 22.0°N | 155.9°W | 1500 | 98 | 09 | 16 | 00 | X | 1014.6 | 6 | 1.4 | 76.4 | 70.8 | 77.3 | X | X | X | X | X | X | XX | X | X |
| 9/5 | 21.7°N | 156.5°W | 1800 | 99 | 09 | 18 | 03 | 2 | 1015.9 | 2 | 1.0 | 77.8 | 72.9 | 76.8 | 8 | 1 | 1 | 3 | 0 | 4 | 09 | 2 | 2 |

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS)[1/]

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 6/12 | 21.3°N | 157.6°W | 0600 | 99 | 06 | 18 | 02 | 0 | 1017.3 | X | XX | 77.2 | 72.0 | 76.5 | 2 | 2 | 2 | 5 | 0 | 0 | 06 | 2 | 4 |
| 6/12 | 22.4°N | 156.5°W | 1800 | 99 | 08 | 17 | 02 | 2 | 1019.6 | 2 | 1.0 | 77.0 | 70.2 | 76.5 | 6 | 4 | 4 | 4 | 0 | 0 | 09 | 3 | 3 |
| 6/12 | 22.7°N | 156.0°W | 2300 | 99 | 09 | 22 | 02 | 1 | 1020.3 | 0 | 0.0 | 80.0 | 72.0 | 76.5 | 2 | 2 | 1 | 5 | 5 | 0 | 09 | 2 | 3 |
| 6/13 | 23.2°N | 155.8°W | 0600 | 99 | 09 | 18 | 02 | 0 | 1020.7 | 3 | 1.4 | 78.0 | 72.0 | 76.5 | 2 | 1 | 1 | 5 | 5 | 0 | 09 | 3 | 3 |
| 6/13 | 23.8°N | 155.3°W | 1200 | 98 | 08 | 16 | 00 | 0 | 1021.0 | 0 | 1.0 | 76.7 | 72.0 | 76.0 | 8 | 8 | 5 | 4 | X | X | 09 | 3 | 3 |
| 6/13 | 24.3°N | 154.7°W | 1800 | 99 | 10 | 20 | 03 | 2 | 1021.7 | 2 | 0.7 | 76.3 | 72.0 | 76.0 | 6 | 6 | 5 | 5 | 1 | 8 | 09 | 3 | 5 |
| 6/13 | 24.8°N | 154.2°W | 2300 | 99 | 09 | 19 | 02 | 2 | 1021.7 | 4 | 0.0 | 79.0 | 74.0 | 76.5 | 7 | 7 | 1 | 5 | 1 | 8 | 09 | 3 | 5 |
| 6/14 | 25.3°N | 153.7°W | 0600 | 99 | 08 | 17 | 01 | 1 | 1022.0 | 2 | 1.0 | 76.0 | 71.5 | 76.0 | 3 | 3 | 5 | 5 | 7 | 1 | 09 | 3 | 4 |
| 6/14 | 25.8°N | 153.2°W | 1200 | 99 | 09 | 15 | 01 | 0 | 1022.4 | 7 | 0.9 | 75.1 | 70.0 | 75.5 | 5 | 5 | 5 | 5 | 7 | 1 | 09 | 3 | 4 |
| 6/14 | 26.5°N | 152.5°W | 1800 | 99 | 08 | 16 | 03 | 1 | 1022.7 | 2 | 1.0 | 76.5 | 71.0 | 75.0 | 3 | 3 | 4 | 5 | X | X | 11 | 3 | 3 |
| 6/14 | 27.0°N | 152.1°W | 2300 | 99 | 09 | 12 | 01 | 0 | 1022.4 | 0 | 0.7 | 76.5 | 71.0 | 75.5 | 2 | 2 | 4 | 5 | 5 | 1 | 09 | 3 | 3 |
| 6/15 | 27.4°N | 151.6°W | 0600 | 99 | 09 | 15 | 03 | 1 | 1021.7 | 2 | XX | 75.5 | 70.0 | 75.5 | 5 | 5 | 4 | 5 | 0 | 1 | 11 | 2 | 3 |
| 6/15 | 27.9°N | 151.1°W | 1200 | 98 | 07 | 11 | 02 | 1 | 1021.3 | X | XX | 74.0 | 70.0 | 75.2 | 3 | 3 | 2 | 3 | 0 | 0 | 07 | 2 | 2 |
| 6/15 | 28.4°N | 150.5°W | 1800 | 99 | 09 | 14 | 02 | 0 | 1021.0 | 1 | 0.5 | 76.0 | 70.5 | 75.0 | 2 | 2 | 4 | 5 | 5 | 4 | 09 | 2 | 2 |
| 6/15 | 29.2°N | 149.9°W | 2300 | 99 | 09 | 15 | 02 | 1 | 1020.7 | 0 | 0.0 | 76.0 | 69.0 | 75.0 | 5 | 5 | 4 | 5 | 5 | 1 | 09 | 2 | 3 |
| 6/16 | 29.7°N | 149.2°W | 0600 | 99 | 09 | 12 | 01 | 1 | 1020.3 | 2 | 0.9 | 74.5 | 68.0 | 74.0 | 1 | 1 | 4 | 5 | 4 | 1 | 09 | 2 | 2 |
| 6/16 | 30.2°N | 148.5°W | 1200 | 98 | 09 | 04 | 02 | 1 | 1019.6 | 7 | 1.0 | 72.0 | 66.0 | 73.2 | 6 | 6 | 2 | 4 | 0 | 0 | 09 | 2 | 1 |
| 6/16 | 30.9°N | 148.0°W | 1800 | 99 | 07 | 05 | 02 | 1 | 1021.7 | 2 | 1.9 | 73.8 | 67.0 | 73.3 | 2 | 0 | 0 | 9 | 1 | 0 | 09 | 2 | 2 |
| 6/16 | 31.4°N | 147.4°W | 2300 | 99 | 07 | 07 | 02 | 0 | 1022.4 | 2 | 0.5 | 75.0 | 68.0 | 74.5 | 1 | 1 | 5 | 5 | 1 | 0 | 07 | 2 | 2 |
| 6/17 | 32.0°N | 146.7°W | 0600 | 99 | 08 | 10 | 03 | 1 | 1022.7 | 2 | 1.0 | 74.0 | 68.0 | 73.8 | 7 | 4 | 1 | 5 | 2 | 4 | 07 | 2 | 2 |
| 6/17 | 32.6°N | 146.2°W | 1200 | 97 | 13 | 04 | 02 | 2 | 1024.0 | 2 | 0.7 | 71.0 | 68.2 | 70.4 | 7 | 0 | 0 | 9 | 1 | 5 | 06 | 3 | 2 |
| 6/17 | 33.1°N | 145.7°W | 1800 | 98 | 00 | 05 | 02 | 1 | 1025.7 | 2 | 0.9 | 71.8 | 69.5 | 69.3 | 6 | 0 | 0 | 9 | 4 | 0 | 16 | 3 | 2 |
| 6/17 | 33.9°N | 145.1°W | 2300 | 99 | 14 | 02 | 02 | 1 | 1025.7 | 8 | 0.7 | 73.0 | 67.1 | 73.0 | 6 | 3 | 1 | 3 | 1 | 8 | 00 | 2 | 2 |
| 6/18 | 34.3°N | 144.4°W | 0600 | 98 | 16 | 05 | 01 | 1 | 1025.7 | 0 | 1.0 | 72.0 | 67.0 | 70.3 | 3 | 2 | 1 | 3 | 2 | 1 | 49 | 2 | 2 |
| 6/18 | 35.0°N | 143.9°W | 1200 | 98 | 23 | 05 | 02 | 0 | 1025.7 | 8 | 1.0 | 69.8 | 67.1 | 69.0 | 3 | 3 | 2 | 3 | 0 | 0 | 49 | 2 | 2 |
| 6/18 | 35.6°N | 143.3°W | 1800 | 98 | 23 | 11 | 02 | 1 | 1024.7 | 4 | 0.0 | 67.1 | 66.2 | 67.0 | 5 | 5 | 4 | 3 | 1 | 4 | 30 | 2 | 2 |
| 6/18 | 36.0°N | 143.0°W | 2300 | 99 | 23 | 12 | 02 | 2 | 1024.4 | 7 | 0.7 | 69.3 | 67.0 | 66.3 | 7 | 7 | 5 | 3 | 1 | 0 | 24 | 3 | 3 |
| 6/19 | 36.2°N | 143.0°W | 0600 | 98 | 25 | 13 | 02 | 2 | 1023.0 | 0 | 0.0 | 66.6 | 64.5 | 65.5 | 8 | 8 | 6 | 3 | X | X | 25 | 3 | 3 |
| 6/19 | 36.2°N | 143.0°W | 1100 | 98 | 26 | 18 | 02 | 2 | 1022.7 | 7 | 0.7 | 65.5 | 63.5 | 65.5 | 8 | 8 | 6 | 3 | X | X | 27 | 2 | 2 |
| 6/19 | 36.3°N | 142.7°W | 1800 | 98 | 31 | 15 | 02 | 2 | 1023.7 | 2 | 1.0 | 66.0 | 64.0 | 65.5 | 8 | 8 | 6 | 3 | X | X | 30 | 3 | 3 |
| 6/19 | 36.7°N | 141.9°W | 2300 | 99 | 16 | 12 | 02 | 2 | 1024.7 | 7 | 0.3 | 60.0 | 59.0 | 63.9 | 7 | 7 | 6 | 4 | 0 | 0 | 16 | 4 | 5 |
| 6/20 | 36.9°N | 141.8°W | 0500 | 98 | 36 | 16 | 02 | 2 | 1025.7 | 2 | 1.0 | 62.0 | 58.5 | 63.6 | 8 | 8 | 6 | 4 | X | X | 35 | 2 | 2 |
| 6/20 | 36.9°N | 141.8°W | 1200 | 98 | 23 | 12 | 02 | 2 | 1026.1 | 0 | 0.0 | 62.5 | 56.0 | 63.0 | 8 | 8 | 5 | 3 | X | X | 33 | 3 | 3 |
| 6/20 | 37.4°N | 141.0°W | 2300 | 98 | 04 | 12 | 02 | 2 | 1026.8 | 2 | 0.7 | 63.0 | 56.0 | 63.8 | 8 | 8 | 5 | 3 | X | X | 02 | 3 | 2 |
| 6/21 | 38.0°N | 140.1°W | 0600 | 98 | 04 | 04 | 02 | 2 | 1026.4 | 2 | 0.7 | 62.0 | 55.5 | 63.0 | 8 | 8 | 5 | 3 | X | X | 02 | 3 | 2 |
| 6/21 | 38.6°N | 139.4°W | 1200 | 97 | 12 | 05 | 02 | 2 | 1025.1 | 7 | 0.7 | 59.9 | 53.7 | 62.0 | 8 | 8 | 5 | 3 | X | X | 05 | 3 | 2 |
| 6/21 | 38.9°N | 139.2°W | 1700 | 98 | 00 | 00 | 02 | 2 | 1025.7 | 2 | 0.3 | 60.0 | 54.0 | 62.0 | 8 | 8 | 5 | 3 | X | X | 01 | 2 | 2 |
| 6/21 | 39.3°N | 138.6°W | 2300 | 98 | 16 | 11 | 02 | 2 | 1024.7 | 7 | 1.7 | 62.5 | 57.5 | 61.5 | 8 | 8 | 5 | 3 | X | X | 35 | 2 | 2 |
| 6/22 | 39.7°N | 138.2°W | 0600 | 98 | 19 | 13 | 02 | 2 | 1023.4 | 0 | 0.0 | 61.1 | 56.2 | 61.0 | 7 | 7 | 5 | 3 | 0 | 0 | 19 | 2 | 2 |
| 6/22 | 39.7°N | 138.2°W | 1100 | 98 | 18 | 14 | 02 | 2 | 1021.7 | 7 | 1.0 | 61.0 | 56.3 | 61.5 | 8 | 8 | 5 | 3 | X | X | 20 | 2 | 2 |

[1/] All columns in USWB 1210-F are not included here. Those deleted are:

Column 2 Day of week
" 3 Octant
" 13 Barometer as read
" 14 Barometer as corrected
" 17 Air temperature, °F.
Column 23 Course of ship
" 24 Speed of ship
" 31 Diff. sea-air, °F.
" 32 Dew point, °F.

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS) (cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 6/22 | 39.8°N | 138.0°W | 1700 | 98 | 24 | 10 | 02 | 2 | 1022.0 | 2 | 0.7 | 63.0 | 58.5 | 61.5 | 8 | 8 | 5 | 3 | X | X | 25 | 1 | 3 |
| 6/22 | 40.8°N | 136.5°W | 2300 | 99 | 22 | 11 | 02 | 2 | 1022.0 | 7 | 0.7 | 65.7 | 60.2 | 60.4 | 7 | 7 | 5 | 3 | 0 | 0 | 22 | 1 | 2 |
| 6/23 | 40.9°N | 136.5°W | 0500 | 98 | 24 | 15 | 50 | 2 | 1022.7 | 2 | 1.0 | 60.0 | 59.0 | 60.0 | 8 | 8 | 5 | 3 | X | X | 24 | 3 | 3 |
| 6/23 | 41.3°N | 135.6°W | 1200 | 98 | 01 | 08 | 01 | 1 | 1024.0 | 2 | 1.0 | 59.0 | 55.5 | 59.5 | 2 | 2 | 1 | 3 | 0 | 0 | 23 | 3 | 2 |
| 6/23 | 42.0°N | 135.0°W | 1700 | 99 | 35 | 11 | 03 | 0 | 1026.1 | 2 | 1.7 | 59.1 | 53.0 | 59.5 | 4 | 4 | 5 | 3 | 0 | 0 | 35 | 4 | 4 |
| 6/23 | 40.6°N | 135.1°W | 2300 | 99 | 35 | 09 | 01 | 0 | 1027.8 | 2 | 0.9 | 60.0 | 54.0 | 61.5 | 2 | 2 | 5 | 4 | 6 | 0 | 34 | 3 | 3 |
| 6/24 | 40.6°N | 135.1°W | 0500 | 99 | 30 | 06 | 03 | 0 | 1027.8 | 2 | 0.7 | 60.5 | 55.0 | 61.0 | 4 | 4 | 4 | 5 | 1 | 0 | 34 | 3 | 4 |
| 6/24 | 39.8°N | 135.0°W | 1100 | 93 | XX | 11 | 00 | 0 | 1027.8 | 4 | 0.7 | 60.8 | 54.5 | 62.5 | 4 | 4 | 1 | 5 | X | X | XX | X | X |
| 6/24 | 39.1°N | 135.0°W | 1700 | 98 | 05 | 11 | 03 | 1 | 1028.1 | 2 | 0.3 | 60.5 | 55.0 | 63.5 | 8 | 8 | 4 | 3 | X | X | 09 | 3 | 2 |
| 6/24 | 39.3°N | 135.0°W | 2300 | 99 | 04 | 06 | 01 | 2 | 1026.8 | 7 | 0.9 | 64.0 | 59.0 | 62.5 | 5 | 5 | 4 | 3 | 0 | 0 | 35 | 2 | 2 |
| 6/25 | 40.0°N | 135.0°W | 0500 | 98 | 03 | 05 | 01 | 1 | 1025.7 | 6 | 1.0 | 59.8 | 55.0 | 63.0 | 3 | 2 | 1 | 3 | 0 | 1 | 30 | 2 | 1 |
| 6/25 | 39.9°N | 134.9°W | 1100 | 98 | 03 | 03 | 02 | 0 | 1024.0 | 7 | 1.0 | 61.0 | 56.5 | 62.5 | 3 | 3 | 1 | 3 | 0 | 1 | 02 | 2 | 1 |
| 6/25 | 39.8°N | 134.8°W | 1700 | 99 | 25 | 01 | 03 | 1 | 1024.4 | 2 | 0.2 | 62.0 | 57.0 | 62.5 | 5 | 5 | 4 | 5 | 0 | 0 | 04 | 3 | 1 |
| 6/25 | 38.9°N | 134.8°W | 2300 | 99 | 35 | 07 | 01 | 1 | 1024.0 | 0 | 0.0 | 66.8 | 59.8 | 65.8 | 4 | 4 | 1 | 5 | 0 | 0 | 09 | 3 | 1 |
| 6/26 | 38.5°N | 134.5°W | 0500 | 99 | 35 | 07 | 02 | 1 | 1024.0 | 5 | 0.3 | 64.0 | 59.0 | 64.8 | 5 | 5 | 1 | 5 | 0 | 0 | 35 | 2 | 2 |
| 6/26 | 38.5°N | 134.5°W | 1100 | 98 | 32 | 08 | 02 | 1 | 1023.7 | 7 | 0.3 | 63.0 | 58.2 | 64.0 | 6 | 5 | 1 | 5 | 0 | 0 | 32 | 2 | 2 |
| 6/26 | 38.2°N | 134.3°W | 2300 | 99 | 35 | 10 | 02 | 1 | 1024.7 | 0 | 0.0 | 67.0 | 62.0 | 65.5 | 2 | 2 | 1 | 5 | 0 | 0 | 01 | 3 | 2 |
| 6/27 | 36.9°N | 133.9°W | 0500 | 98 | 32 | 08 | 03 | 1 | 1024.4 | 5 | 0.3 | 65.0 | 63.0 | 65.5 | 7 | 7 | 4 | 5 | X | X | 35 | 3 | 2 |
| 6/27 | 36.9°N | 133.9°W | 1100 | 92 | 32 | 08 | 02 | 2 | 1022.7 | X | XX | 65.0 | 62.0 | 65.5 | 8 | 8 | X | X | X | X | 32 | 3 | 2 |
| 6/27 | 36.5°N | 133.8°W | 1700 | 98 | 32 | 08 | 03 | 2 | 1023.0 | 3 | 0.3 | 67.5 | 65.5 | 65.5 | 8 | 8 | 6 | 4 | X | X | 34 | 3 | 2 |
| 6/27 | 35.8°N | 133.8°W | 2300 | 98 | 35 | 19 | 02 | 2 | 1021.7 | 7 | 0.7 | 69.0 | 66.5 | 66.5 | 7 | 7 | 4 | 5 | 0 | 0 | 35 | 3 | 2 |
| 6/28 | 34.9°N | 133.9°W | 0500 | 91 | 34 | 13 | 45 | 4 | 1021.0 | 0 | 0.0 | 66.8 | 65.5 | 68.1 | 9 | 9 | X | 0 | X | X | 34 | 3 | 4 |
| 6/28 | 34.4°N | 133.7°W | 1100 | 98 | 34 | 14 | 01 | 2 | 1020.3 | 7 | 0.7 | 66.0 | 65.0 | 66.6 | 3 | 3 | 4 | 4 | X | X | 34 | 3 | 2 |
| 6/28 | 33.5°N | 133.6°W | 1700 | 98 | 35 | 23 | 21 | 5 | 1021.0 | 2 | 0.7 | 68.5 | 66.0 | 67.5 | 5 | 5 | 4 | 4 | 0 | 0 | 01 | 3 | 3 |
| 6/28 | 32.9°N | 133.6°W | 2300 | 96 | 20 | 15 | 03 | 2 | 1020.3 | 0 | 0.0 | 69.5 | 69.5 | 68.1 | 6 | 6 | 5 | 2 | 0 | 0 | 04 | 3 | 4 |
| 6/29 | 32.0°N | 133.5°W | 0500 | 98 | 04 | 25 | 20 | 2 | 1019.6 | 2 | 0.3 | 67.7 | 64.0 | 67.5 | 8 | 8 | 5 | 2 | X | X | 04 | 3 | 4 |
| 6/29 | 31.1°N | 133.4°W | 1100 | 98 | 07 | 14 | 02 | 2 | 1019.3 | 7 | 1.0 | 68.5 | 63.5 | 66.0 | 8 | 8 | 4 | 2 | X | X | 04 | 3 | 4 |
| 6/29 | 31.2°N | 133.0°W | 1700 | 98 | 05 | 19 | 02 | 2 | 1020.0 | 2 | 1.0 | 66.0 | 61.0 | 66.8 | 8 | 8 | 5 | 3 | X | X | 00 | 3 | 5 |
| 6/29 | 31.5°N | 132.3°W | 2300 | 98 | 05 | 18 | 02 | 2 | 1020.0 | 4 | 0.0 | 67.0 | 62.0 | 67.0 | 8 | 8 | 5 | 3 | X | X | 04 | 3 | 5 |
| 6/30 | 31.9°N | 131.7°W | 0500 | 98 | 05 | 18 | 02 | 2 | 1021.0 | 2 | 0.3 | 66.0 | 61.5 | 66.0 | 8 | 8 | 4 | 3 | X | X | 04 | 3 | 5 |
| 6/30 | 33.5°N | 130.5°W | 1100 | 98 | 05 | 18 | 02 | 2 | 1020.0 | 7 | 0.3 | 65.0 | 60.2 | 65.9 | X | X | X | X | X | X | 04 | 3 | 5 |
| 6/30 | 32.5°N | 130.3°W | 1700 | 98 | 05 | 18 | 02 | 2 | 1022.0 | 2 | 0.7 | 65.0 | 59.0 | 65.5 | 8 | 8 | 4 | 3 | X | X | 04 | 3 | 5 |
| 6/30 | 32.9°N | 129.7°W | 2300 | 98 | 01 | 18 | 02 | 2 | 1021.3 | 7 | 1.0 | 64.5 | 57.5 | 65.5 | 8 | 8 | 4 | 3 | X | X | 02 | 3 | 5 |
| 7/1 | 33.3°N | 129.0°W | 0500 | 97 | 33 | 15 | 02 | 2 | 1021.7 | X | XX | 64.5 | 59.5 | 64.2 | 8 | 8 | 8 | 3 | X | X | 35 | 4 | 5 |
| 7/1 | 33.7°N | 128.2°W | 1100 | 97 | 34 | 18 | 02 | 2 | 1021.0 | X | XX | 63.0 | 57.0 | 63.0 | 8 | 8 | 4 | 3 | X | X | 36 | 3 | 5 |
| 7/1 | 33.9°N | 127.6°W | 1700 | 98 | 35 | 18 | 02 | 2 | 1021.7 | X | XX | 63.0 | 58.5 | 62.5 | 6 | 6 | 4 | 3 | 0 | 0 | 35 | 3 | 4 |
| 7/1 | 34.2°N | 126.9°W | 2300 | 99 | 31 | 19 | 01 | 1 | 1020.7 | 7 | 0.7 | 64.2 | 61.3 | 63.5 | 3 | 3 | 8 | 3 | 0 | 9 | 02 | 3 | 4 |
| 7/2 | 34.5°N | 126.4°W | 0500 | 99 | 35 | 14 | 01 | 1 | 1020.7 | 4 | 0.0 | 63.5 | 58.5 | 63.3 | 3 | 3 | 8 | 3 | X | X | 35 | 3 | 2 |
| 7/2 | 34.5°N | 126.4°W | 1100 | 99 | 01 | 16 | 02 | 0 | 1017.6 | 7 | 0.2 | 62.0 | 58.5 | 63.5 | 3 | 3 | 8 | 3 | 0 | 0 | 00 | 3 | 2 |
| 7/2 | 34.6°N | 126.2°W | 1700 | 99 | 32 | 18 | 01 | 1 | 1021.0 | 3 | 1.0 | 62.5 | 58.0 | 62.5 | 4 | 4 | 1 | 4 | 0 | 0 | 01 | 3 | 2 |
| 7/2 | 34.8°N | 125.6°W | 2300 | 99 | 34 | 18 | 02 | 0 | 1021.0 | 7 | 0.3 | 65.5 | 59.0 | 61.5 | 3 | 3 | 2 | 4 | 0 | 0 | 01 | 3 | 2 |
| 7/3 | 35.0°N | 125.3°W | 0500 | 99 | 32 | 16 | 02 | 1 | 1020.0 | 0 | 0.0 | 61.5 | 59.0 | 61.5 | 3 | 3 | 2 | 3 | 0 | 0 | 31 | 3 | 6 |
| 7/3 | 41.3°N | 126.1°W | 1100 | 97 | 02 | 20 | 02 | 0 | 1021.0 | 2 | 0.7 | 61.5 | 57.8 | 61.6 | 3 | 3 | 2 | 3 | 0 | 0 | 35 | 3 | 6 |
| 7/3 | 35.0°N | 127.1°W | 1700 | 97 | 34 | 17 | 02 | 0 | 1023.7 | 2 | 1.4 | 64.0 | 59.5 | 62.5 | 3 | 3 | 4 | 3 | 0 | 0 | 01 | 3 | 4 |
| 7/3 | 34.9°N | 127.9°W | 2300 | 98 | 02 | 20 | 03 | 1 | 1024.4 | 7 | 0.2 | 65.0 | 61.0 | 64.0 | 7 | 7 | 4 | 3 | 0 | 0 | 00 | 3 | 4 |
| 7/4 | 35.0°N | 128.9°W | 0500 | 98 | 00 | 23 | 01 | 1 | 1023.7 | 4 | 0.0 | 63.0 | 59.0 | 63.1 | 5 | 5 | 5 | 4 | 0 | 0 | 00 | 3 | 6 |
| 7/4 | 34.9°N | 129.8°W | 1100 | 98 | 32 | 20 | 02 | 2 | 1023.0 | 4 | 0.0 | 64.0 | 58.0 | 64.5 | 7 | 7 | 5 | 4 | X | X | 01 | 3 | 4 |
| 7/4 | 34.9°N | 130.6°W | 1700 | 98 | 35 | 20 | 02 | 2 | 1024.4 | 2 | 1.0 | 64.0 | 58.5 | 64.5 | 4 | 4 | 4 | 4 | 9 | 0 | 01 | 3 | 4 |
| 7/4 | 35.1°N | 131.5°W | 2300 | 99 | 33 | 18 | 02 | 2 | 1023.0 | 3 | 1.7 | 64.5 | 60.2 | 64.4 | 7 | 7 | 5 | 5 | 6 | 0 | 01 | 4 | 5 |
| 7/5 | 35.1°N | 132.5°W | 0500 | 98 | 35 | 14 | 02 | 2 | 1023.7 | 0 | 0.0 | 64.0 | 58.5 | 65.5 | 8 | 8 | 4 | 3 | X | X | 02 | 3 | 5 |

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS) (cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 7/5 | 35.6°N | 131.8°W | 1100 | 99 | 35 | 16 | 02 | 2 | 1022.2 | 1 | 1.7 | 63.5 | 59.0 | 65.0 | 8 | 8 | 4 | 3 | X | X | 01 | 3 | 4 |
| 7/5 | 36.0°N | 131.1°W | 1700 | 94 | 33 | 15 | 46 | 4 | 1022.4 | 2 | 0.3 | 63.5 | 61.0 | 64.0 | 8 | 8 | 5 | 3 | 6 | X | 30 | 3 | 4 |
| 7/5 | 36.3°N | 130.6°W | 2300 | 98 | 36 | 14 | 01 | 2 | 1021.3 | 7 | 0.2 | 64.0 | 61.0 | 64.5 | 5 | 5 | 5 | 3 | 0 | 0 | 01 | 3 | 3 |
| 7/6 | 36.6°N | 130.2°W | 0500 | 97 | 34 | 08 | 03 | 1 | 1021.7 | 2 | 0.3 | 62.5 | 61.0 | 63.0 | 6 | 4 | 6 | 0 | 4 | X | 32 | 3 | 3 |
| 7/6 | 36.6°N | 130.2°W | 1100 | 93 | 00 | 08 | 46 | 4 | 1021.3 | 0 | 0.0 | 62.4 | 60.5 | 63.5 | 9 | 9 | X | 0 | X | X | 00 | 2 | 2 |
| 7/6 | 36.8°N | 130.0°W | 1700 | 98 | 35 | 13 | 01 | 2 | 1023.4 | 2 | 1.0 | 62.7 | 60.0 | 63.0 | 6 | 6 | 4 | 3 | 6 | X | 35 | 2 | 2 |
| 7/6 | 37.2°N | 129.3°W | 2300 | 98 | 33 | 18 | 03 | 1 | 1023.0 | 7 | 0.7 | 64.0 | 61.0 | 63.5 | 8 | 6 | 4 | 3 | X | X | 35 | 3 | 3 |
| 7/7 | 37.4°N | 129.1°W | 0500 | 98 | 34 | 12 | 02 | 2 | 1022.7 | 2 | 0.7 | 63.5 | 59.3 | 63.0 | 8 | 8 | 5 | 2 | X | X | 34 | 3 | 2 |
| 7/7 | 37.5°N | 129.0°W | 1100 | 98 | 34 | 10 | 02 | 2 | 1022.7 | 7 | 0.7 | 62.5 | 58.5 | 63.0 | 4 | 4 | 5 | 2 | X | X | 34 | 2 | 2 |
| 7/7 | 37.5°N | 129.0°W | 1700 | 99 | 35 | 10 | 01 | 0 | 1023.7 | 2 | 0.5 | 64.5 | 61.0 | 63.0 | 2 | 2 | 1 | 3 | 0 | 0 | 00 | 2 | 2 |
| 7/7 | 37.7°N | 128.5°W | 2300 | 99 | 35 | 11 | 02 | 0 | 1023.0 | 7 | 0.7 | 64.5 | 61.0 | 62.0 | 0 | 0 | 0 | 9 | 0 | 0 | 02 | 3 | 3 |
| 7/8 | 38.1°N | 128.0°W | 0500 | 99 | 35 | 10 | 02 | 0 | 1023.0 | 3 | 0.7 | 62.5 | 57.0 | 62.0 | 0 | 0 | 0 | 9 | 0 | 0 | 00 | 3 | 3 |
| 7/8 | 38.6°N | 127.5°W | 1100 | 99 | 35 | 13 | 02 | 0 | 1021.7 | 7 | 0.7 | 63.5 | 60.0 | 61.5 | 0 | 0 | 0 | 9 | 0 | 0 | 00 | 3 | 3 |
| 7/8 | 38.8°N | 127.0°W | 1700 | 99 | 32 | 15 | 02 | 1 | 1022.4 | 2 | 0.2 | 63.3 | 60.0 | 61.9 | 8 | 8 | 5 | 3 | X | X | 00 | 3 | 3 |
| 7/8 | 39.4°N | 126.3°W | 2300 | 99 | 34 | 15 | 02 | 2 | 1021.3 | X | XX | 62.5 | 59.5 | 61.5 | 2 | 2 | 4 | 3 | 0 | 0 | 00 | 3 | 4 |
| 7/9 | 39.6°N | 125.5°W | 0500 | 99 | 35 | 18 | 02 | 0 | 1020.0 | 7 | 0.7 | 62.0 | 59.5 | 59.5 | 0 | 0 | 0 | 9 | 0 | 0 | 00 | 3 | 2 |
| 7/9 | 40.0°N | 125.0°W | 1100 | 98 | 00 | 14 | 02 | 0 | 1020.3 | 7 | 1.0 | 57.5 | 55.0 | 52.5 | 0 | 0 | 0 | 9 | 0 | 0 | 00 | 3 | 3 |
| 7/9 | 40.0°N | 125.7°W | 1700 | 98 | 33 | 12 | 02 | 1 | 1021.0 | 2 | 0.2 | 63.5 | 62.0 | 61.5 | 6 | 6 | 4 | 3 | 0 | 0 | 31 | 3 | 2 |
| 7/9 | 40.0°N | 126.6°W | 2300 | 99 | 33 | 09 | 02 | 1 | 1021.0 | 7 | 0.7 | 62.5 | 60.0 | 62.0 | 1 | 1 | 4 | 3 | 0 | 0 | 33 | 2 | 2 |
| 7/10 | 40.0°N | 126.9°W | 0500 | 98 | 31 | 08 | 02 | 0 | 1020.0 | 6 | 0.2 | 64.7 | 61.5 | 62.4 | 1 | 1 | 2 | 3 | 0 | 0 | 31 | 3 | 2 |
| 7/10 | 40.0°N | 126.9°W | 1100 | 98 | 24 | 08 | 02 | 0 | 1018.3 | 7 | 0.9 | 64.0 | 62.0 | 62.4 | 1 | 1 | 2 | 3 | 0 | 0 | 32 | 3 | 2 |
| 7/10 | 40.0°N | 127.1°W | 1700 | 97 | 30 | 12 | 03 | 1 | 1018.3 | 7 | 0.5 | 65.5 | 63.0 | 62.5 | 8 | 8 | 4 | 3 | X | X | 31 | 2 | 2 |
| 7/10 | 40.0°N | 129.2°W | 2300 | 99 | 28 | 15 | 01 | 2 | 1018.6 | 0 | 0.0 | 64.2 | 60.2 | 62.2 | 6 | 6 | 5 | 3 | 0 | 0 | 25 | 3 | 5 |
| 7/11 | 40.0°N | 128.5°W | 0500 | 98 | 28 | 15 | 02 | 2 | 1021.3 | 2 | 1.7 | 63.0 | 59.0 | 63.0 | 5 | 5 | 5 | 3 | X | X | 25 | 3 | 4 |
| 7/11 | 40.0°N | 129.1°W | 1100 | 98 | 34 | 13 | 02 | 2 | 1022.7 | 2 | 1.7 | 63.0 | 59.5 | 62.0 | 6 | 6 | 5 | 3 | X | X | 34 | 3 | 5 |
| 7/11 | 40.1°N | 130.1°W | 1700 | 99 | 05 | 06 | 02 | 2 | 1024.4 | 2 | 0.7 | 65.0 | 58.2 | 62.5 | 6 | 3 | 5 | 5 | 7 | 6 | 49 | 4 | 3 |
| 7/11 | 40.1°N | 131.1°W | 2400 | 99 | 10 | 07 | 02 | 2 | 1022.7 | 7 | 1.2 | 68.5 | 60.0 | 64.0 | 3 | 3 | 2 | 4 | 6 | 6 | 34 | 4 | 2 |
| 7/12 | 40.2°N | 132.0°W | 0500 | 99 | 15 | 10 | 02 | 1 | 1020.3 | 7 | 1.2 | 64.0 | 60.0 | 63.5 | 3 | 2 | 1 | 5 | 0 | 6 | 17 | 3 | 3 |
| 7/12 | 40.0°N | 132.8°W | 1100 | 98 | 14 | 20 | 00 | 1 | 1014.9 | 7 | 2.5 | 65.0 | 62.3 | 63.0 | 8 | 8 | 5 | 4 | X | X | 49 | 2 | 2 |
| 7/12 | 39.9°N | 133.3°W | 1700 | 97 | 24 | 10 | 21 | 6 | 1009.1 | 7 | 1.0 | 65.0 | 63.0 | 63.5 | 8 | 8 | 5 | 3 | X | X | 24 | 3 | 3 |
| 7/12 | 40.3°N | 132.8°W | 2300 | 98 | 18 | 13 | 02 | 6 | 1008.1 | 7 | 1.7 | 66.0 | 64.0 | 63.0 | 8 | 8 | 4 | 3 | X | X | 21 | 3 | 5 |
| 7/13 | 40.6°N | 132.2°W | 0500 | 98 | 24 | 11 | 03 | 1 | 1006.1 | 6 | 1.0 | 64.3 | 62.0 | 62.5 | 7 | 7 | 5 | 3 | X | X | 23 | 4 | 5 |
| 7/13 | 40.9°N | 131.7°W | 1100 | 98 | 24 | 16 | 02 | 2 | 1004.7 | 6 | 0.7 | 62.5 | 60.5 | 62.5 | 7 | 7 | 4 | 3 | 1 | X | 23 | 3 | 3 |
| 7/13 | 41.5°N | 130.8°W | 1700 | 99 | 25 | 05 | 02 | 1 | 1005.4 | 2 | 0.2 | 64.0 | 60.5 | 62.0 | 4 | 3 | 4 | 3 | 1 | 0 | 22 | 3 | 3 |
| 7/13 | 42.0°N | 130.1°W | 2300 | 99 | 24 | 14 | 02 | 1 | 1006.8 | 2 | 1.0 | 64.2 | 61.0 | 62.5 | 7 | 7 | 2 | 3 | 0 | 0 | 24 | 4 | 3 |
| 7/14 | 42.5°N | 129.5°W | 0500 | 98 | 30 | 18 | 03 | 1 | 1008.8 | 2 | 1.0 | 61.0 | 58.0 | 61.5 | 8 | 8 | 2 | 3 | X | X | 24 | 3 | 3 |
| 7/14 | 42.3°N | 129.2°W | 1100 | 98 | 27 | 20 | 01 | 1 | 1010.8 | 2 | 1.4 | 62.5 | 58.5 | 61.5 | 5 | 5 | 4 | 4 | X | X | 28 | 3 | 5 |
| 7/14 | 42.6°N | 128.8°W | 1700 | 99 | 29 | 17 | 01 | 2 | 1015.9 | 2 | 2.4 | 62.0 | 58.0 | 61.8 | 6 | 6 | 5 | 3 | 0 | 0 | 24 | 5 | 8 |
| 7/14 | 43.0°N | 128.1°W | 2300 | 98 | 29 | 21 | 02 | 2 | 1020.3 | 2 | 2.2 | 62.5 | 58.0 | 62.5 | 5 | 5 | 5 | 3 | 0 | 0 | 26 | 4 | 6 |
| 7/15 | 43.3°N | 127.7°W | 0500 | 98 | 28 | 06 | 02 | 2 | 1023.4 | 2 | 1.5 | 62.0 | 57.0 | 62.0 | 5 | 5 | 4 | 4 | X | X | 26 | 4 | 5 |
| 7/15 | 43.8°N | 123.4°W | 1100 | 98 | 29 | 16 | 02 | 1 | 1022.0 | 3 | 0.0 | 59.1 | 55.1 | 60.0 | 4 | 4 | 5 | 3 | 0 | 0 | 26 | 4 | 3 |
| 7/15 | 44.2°N | 126.7°W | 1700 | 99 | 33 | 14 | 02 | 1 | 1023.4 | 2 | 0.7 | 60.0 | 56.0 | 62.0 | 2 | 2 | 2 | 4 | 0 | 0 | 35 | 3 | 3 |
| 7/15 | 44.8°N | 126.2°W | 2300 | 99 | 33 | 12 | 02 | 1 | 1025.7 | 7 | 0.2 | 65.0 | 63.5 | 63.0 | 5 | 4 | 2 | 5 | 2 | 0 | 26 | 3 | 3 |
| 7/16 | 45.4°N | 125.7°W | 0500 | 98 | 34 | 13 | 02 | 1 | 1023.4 | X | XX | 61.5 | 58.0 | 62.0 | 4 | 4 | 2 | 4 | 0 | 0 | 02 | 2 | 3 |
| 7/16 | 45.8°N | 124.8°W | 1100 | 98 | 34 | 15 | 02 | 1 | 1022.4 | 7 | 0.5 | 60.0 | 55.0 | 62.5 | 4 | 4 | 2 | 4 | 0 | 0 | 01 | 2 | 3 |
| 7/22 | 46.0°N | 124.5°W | 2300 | 97 | 23 | 02 | 03 | 2 | 1017.3 | X | XX | 62.5 | 57.5 | 61.2 | 6 | 6 | 4 | 3 | 0 | 0 | 34 | 3 | 2 |
| 7/23 | 45.8°N | 125.2°W | 0500 | 97 | 33 | 01 | 02 | 2 | 1019.0 | 2 | 1.0 | 63.5 | 61.5 | 62.5 | 6 | 6 | 4 | 4 | X | X | 33 | 3 | 2 |
| 7/23 | 44.6°N | 126.1°W | 1100 | 98 | 34 | 09 | 50 | 1 | 1021.3 | 2 | 0.7 | 61.9 | 60.0 | 62.5 | 7 | 7 | 5 | 4 | X | X | 28 | 2 | 1 |
| 7/23 | 44.3°N | 126.6°W | 1700 | 97 | 34 | 08 | 21 | 2 | 1023.4 | 2 | 1.0 | 61.0 | 58.5 | 63.0 | 8 | 8 | 5 | 2 | X | X | 30 | 2 | 2 |
| 7/23 | 43.8°N | 127.4°W | 2300 | 98 | 32 | 11 | 01 | 2 | 1024.7 | 2 | 0.5 | 63.5 | 61.5 | 62.5 | 7 | 7 | 4 | 4 | 0 | 0 | 32 | 2 | 2 |

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS) (cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 7/24 | 43.7°N | 127.9°W | 0500 | 98 | 34 | 09 | 02 | 1 | 1024.7 | 0 | 0.0 | 60.5 | 56.0 | 61.5 | 3 | 3 | 2 | 3 | 0 | 0 | 34 | 2 | 2 |
| 7/24 | 43.3°N | 127.9°W | 1100 | 98 | 32 | 15 | 02 | 0 | 1023.7 | 8 | 0.5 | 62.5 | 56.5 | 62.0 | 3 | 3 | 2 | 3 | X | X | 34 | 2 | 1 |
| 7/24 | 43.7°N | 127.7°W | 1700 | 98 | 33 | 12 | 03 | 1 | 1024.0 | 7 | 0.3 | 61.5 | 58.0 | 61.5 | 8 | 8 | 4 | 4 | X | X | 34 | 3 | 3 |
| 7/24 | 43.3°N | 127.2°W | 2300 | 99 | 33 | 12 | 02 | 1 | 1022.0 | 7 | 1.7 | 63.0 | 57.5 | 63.1 | 3 | 3 | 2 | 4 | 0 | 0 | 34 | 3 | 3 |
| 7/25 | 42.8°N | 127.9°W | 0500 | 99 | 33 | 14 | 02 | 0 | 1021.0 | 7 | 0.5 | 62.0 | 57.0 | 62.0 | 3 | 3 | 2 | 4 | 1 | 0 | 34 | 3 | 3 |
| 7/25 | 42.4°N | 128.6°W | 1100 | 99 | 27 | 13 | 02 | 0 | 1019.6 | 7 | 1.0 | 62.0 | 58.5 | 61.5 | 3 | 3 | 1 | 4 | 0 | 0 | 33 | 3 | 3 |
| 7/25 | 42.1°N | 129.1°W | 1700 | 99 | 32 | 15 | 03 | 1 | 1020.3 | 2 | 0.3 | 62.5 | 59.2 | 61.9 | 6 | 5 | 2 | 4 | 6 | 0 | 30 | 2 | 3 |
| 7/25 | 41.7°N | 129.9°W | 2300 | 98 | 32 | 21 | 03 | 2 | 1021.0 | 2 | 0.3 | 62.5 | 58.5 | 62.5 | 6 | 6 | 4 | 4 | 2 | 0 | 30 | 2 | 4 |
| 7/26 | 41.2°N | 130.4°W | 0500 | 98 | 30 | 21 | 03 | 2 | 1023.7 | 2 | 1.5 | 61.5 | 56.5 | 62.0 | 8 | 8 | 4 | 4 | X | X | 30 | 2 | 5 |
| 7/26 | 40.7°N | 130.5°W | 1100 | 97 | 00 | 18 | 02 | 2 | 1024.4 | 0 | 0.0 | 62.5 | 55.0 | 62.0 | 2 | 3 | 5 | 4 | X | X | 00 | 3 | 5 |
| 7/26 | 40.9°N | 131.1°W | 1700 | 97 | 00 | 21 | 02 | 2 | 1025.1 | 2 | 1.0 | 61.0 | 55.5 | 62.0 | 8 | 8 | 5 | 3 | X | X | 00 | 3 | 5 |
| 7/26 | 40.4°N | 131.3°W | 2300 | 98 | 33 | 18 | 02 | 1 | 1025.4 | 2 | 0.2 | 64.0 | 58.5 | 63.0 | 4 | 4 | 4 | 4 | 0 | 0 | 33 | 3 | 5 |
| 7/27 | 39.7°N | 131.3°W | 0500 | 98 | 00 | 16 | 01 | 2 | 1024.7 | 0 | 0.0 | 63.0 | 59.0 | 62.5 | 6 | 6 | 5 | 4 | X | X | 35 | 4 | 5 |
| 7/27 | 38.9°N | 131.2°W | 1100 | 98 | 00 | 14 | 02 | 2 | 1024.7 | 4 | 0.0 | 62.5 | 58.5 | 63.0 | 7 | 7 | 5 | 4 | X | X | 35 | 4 | 4 |
| 7/27 | 38.3°N | 131.0°W | 1700 | 98 | 30 | 17 | 21 | 2 | 1024.4 | 4 | 0.0 | 63.0 | 60.5 | 63.5 | 7 | 7 | 5 | 4 | 0 | 0 | 00 | 3 | 5 |
| 7/27 | 38.4°N | 130.4°W | 2300 | 98 | 31 | 11 | 01 | 2 | 1022.7 | 0 | 0.0 | 65.0 | 62.2 | 64.0 | 7 | 7 | 5 | 3 | 0 | 0 | 00 | 2 | 3 |
| 7/28 | 38.5°N | 129.7°W | 0500 | 98 | 03 | 16 | 02 | 2 | 1022.0 | 6 | 1.0 | 63.5 | 61.0 | 63.5 | 8 | 8 | 5 | 4 | X | X | 03 | 2 | 5 |
| 7/28 | 38.7°N | 129.0°W | 1100 | 98 | 33 | 18 | 01 | 1 | 1019.3 | 7 | 1.0 | 63.0 | 61.0 | 62.0 | 2 | 2 | 5 | 4 | 0 | 0 | 01 | 2 | 5 |
| 7/28 | 38.8°N | 128.6°W | 1700 | 92 | 33 | 16 | 50 | 2 | 1019.6 | 4 | 0.0 | 62.0 | 60.5 | 62.7 | 9 | 9 | X | 0 | X | X | 03 | 2 | 5 |
| 7/28 | 38.8°N | 128.7°W | 2300 | 98 | 35 | 16 | 01 | 2 | 1019.0 | 0 | 0.3 | 63.0 | 60.5 | 63.0 | 5 | 5 | 2 | 4 | 2 | 0 | 32 | 2 | 3 |
| 7/29 | 38.7°N | 127.6°W | 0400 | 98 | 31 | 15 | 01 | 2 | 1018.3 | 7 | 0.3 | 64.5 | 61.0 | 62.5 | 2 | 2 | 4 | 5 | 0 | 0 | 30 | 2 | 2 |
| 7/29 | 38.8°N | 128.7°W | 1100 | 98 | 26 | 06 | 00 | 1 | 1016.9 | 7 | 1.0 | 64.0 | 62.5 | 62.5 | 4 | 4 | 4 | 5 | X | X | 32 | 2 | 2 |
| 7/29 | 38.8°N | 128.6°W | 1700 | 98 | 28 | 04 | 02 | 1 | 1017.3 | 4 | 0.0 | 65.0 | 62.0 | 63.0 | 3 | 3 | 4 | 4 | 5 | 0 | 32 | 2 | 2 |
| 7/29 | 38.9°N | 127.8°W | 2300 | 98 | 34 | 11 | 03 | 1 | 1017.3 | 4 | 0.0 | 65.0 | 62.0 | 63.5 | 5 | 5 | 4 | 5 | 0 | 0 | 01 | 2 | 2 |
| 7/30 | 39.0°N | 127.5°W | 0500 | 98 | 33 | 12 | 02 | 2 | 1017.6 | 2 | 0.7 | 64.7 | 61.5 | 63.2 | 7 | 7 | 8 | 3 | X | X | 29 | 2 | 2 |
| 7/30 | 39.0°N | 127.5°W | 1100 | 97 | 34 | 17 | 02 | 2 | 1018.6 | 2 | 0.2 | 63.0 | 58.0 | 62.8 | 7 | 7 | 8 | 3 | X | X | 30 | 2 | 2 |
| 7/30 | 39.0°N | 127.6°W | 1700 | 98 | 01 | 12 | 02 | 2 | 1020.7 | 2 | 1.0 | 63.5 | 58.0 | 62.6 | 8 | 8 | 5 | 3 | X | X | 32 | 2 | 2 |
| 7/30 | 39.0°N | 127.5°W | 2400 | 99 | 32 | 12 | 02 | 2 | 1020.3 | 0 | 0.0 | 63.0 | 58.0 | 62.8 | 6 | 6 | 5 | 4 | 0 | 0 | 32 | 2 | 3 |
| 7/31 | 39.0°N | 127.5°W | 0500 | 99 | 34 | 20 | 02 | 1 | 1020.3 | 4 | 0.0 | 62.0 | 57.5 | 62.2 | 2 | 2 | 5 | 4 | X | X | 34 | 2 | 3 |
| 7/31 | 39.0°N | 127.4°W | 1200 | 98 | 33 | 16 | 02 | 0 | 1020.0 | 7 | 0.3 | 62.5 | 59.0 | 62.0 | 3 | 3 | 4 | 5 | 0 | 0 | 32 | 2 | 2 |
| 7/31 | 39.0°N | 127.4°W | 2300 | 98 | 33 | 12 | 02 | 0 | 1021.7 | 2 | 0.3 | 65.0 | 60.0 | 63.0 | 2 | 2 | 4 | 5 | 0 | 0 | 33 | 2 | 2 |
| 8/1 | 39.0°N | 127.6°W | 1700 | 98 | 35 | 30 | 02 | 1 | 1022.4 | 2 | 0.7 | 62.5 | 58.5 | 62.6 | 2 | 2 | 4 | 4 | 0 | 0 | 35 | 3 | 6 |
| 8/1 | 39.2°N | 127.6°W | 2300 | 98 | 35 | 20 | 02 | 1 | 1021.0 | 7 | 0.7 | 64.0 | 59.5 | 62.5 | 3 | 3 | 4 | 5 | 0 | 0 | 35 | 3 | 7 |
| 8/2 | 39.3°N | 127.5°W | 0500 | 98 | 00 | 25 | 02 | 0 | 1021.7 | 2 | 0.2 | 62.5 | 58.0 | 62.3 | 3 | 3 | 4 | 5 | X | X | 50 | 2 | 0 |
| 8/2 | 39.5°N | 127.5°W | 1100 | 98 | 00 | 28 | 02 | 0 | 1020.7 | 7 | 0.5 | 61.3 | 58.0 | 62.8 | 4 | 4 | 4 | 5 | X | X | 00 | 2 | 7 |
| 8/2 | 39.5°N | 127.5°W | 1700 | 98 | 00 | 22 | 02 | 0 | 1021.0 | 2 | 0.3 | 64.0 | 60.0 | 62.5 | 3 | 3 | 3 | 5 | 0 | 0 | 00 | 2 | 7 |
| 8/2 | 39.3°N | 127.5°W | 2300 | 99 | 34 | 19 | 03 | 1 | 1020.3 | 6 | 0.7 | 64.0 | 60.1 | 62.0 | 6 | 6 | 5 | 4 | 0 | 0 | 00 | 2 | 7 |
| 8/3 | 38.5°N | 127.5°W | 0500 | 99 | 35 | 20 | 02 | 2 | 1019.6 | 6 | 0.3 | 63.0 | 59.5 | 62.5 | 5 | 5 | 5 | 4 | 0 | 0 | 00 | 2 | 5 |
| 8/3 | 38.8°N | 127.6°W | 1300 | 98 | 34 | 20 | 03 | 1 | 1011.9 | 7 | 1.0 | 64.0 | 60.5 | 62.5 | 8 | 8 | 4 | 4 | X | X | 03 | 2 | 3 |
| 8/3 | 39.0°N | 127.6°W | 1700 | 97 | 28 | 09 | 46 | 2 | 1017.3 | 7 | 0.3 | 64.8 | 61.8 | 59.8 | 8 | 3 | 5 | 6 | 0 | 8 | 31 | 2 | 2 |
| 8/3 | 38.8°N | 127.1°W | 2300 | 98 | 29 | 09 | 02 | 1 | 1016.3 | 0 | 0.0 | 64.0 | 60.5 | 59.8 | 3 | 3 | 5 | 4 | 4 | 0 | 30 | 2 | 2 |
| 8/4 | 38.9°N | 126.5°W | 0500 | 98 | 30 | 11 | 03 | 1 | 1015.9 | 7 | 0.3 | 62.0 | 60.0 | 61.3 | 7 | 7 | 4 | 4 | X | X | 30 | 2 | 2 |
| 8/4 | 38.9°N | 126.5°W | 1100 | 92 | 30 | 09 | 02 | 2 | 1014.2 | 7 | 0.0 | 61.2 | 59.0 | 60.8 | 8 | 8 | X | 0 | X | X | 30 | 2 | 2 |
| 8/4 | 38.8°N | 125.7°W | 1700 | 98 | 23 | 06 | 02 | 1 | 1015.2 | 0 | 0.0 | 63.0 | 60.5 | 61.8 | 1 | 1 | 4 | 5 | 0 | 0 | 27 | 2 | 2 |
| 8/4 | 39.0°N | 126.2°W | 2300 | 99 | 25 | 11 | 03 | 0 | 1015.6 | 7 | 0.3 | 64.0 | 61.0 | 61.3 | 2 | 2 | 2 | 4 | 6 | 9 | 29 | 4 | 8 |
| 8/5 | 38.8°N | 126.5°W | 0500 | 99 | 27 | 06 | 02 | 0 | 1015.9 | 2 | 0.2 | 63.0 | 60.5 | 60.5 | 2 | X | X | X | X | X | 30 | 4 | 7 |
| 8/5 | 38.5°N | 126.1°W | 1100 | 99 | 27 | 11 | 02 | 0 | 1015.2 | 7 | 0.3 | 62.5 | 59.5 | 61.5 | 1 | 1 | 0 | 6 | 6 | 0 | 30 | 3 | 4 |
| 8/5 | 38.4°N | 125.8°W | 1700 | 98 | 31 | 04 | 03 | 1 | 1017.3 | 2 | 1.5 | 61.0 | 58.5 | 55.7 | 7 | 7 | 4 | 4 | 0 | 0 | 31 | 4 | 4 |
| 8/5 | 38.3°N | 125.7°W | 2300 | 99 | 27 | 09 | 02 | 1 | 1017.6 | 0 | 0.0 | 63.0 | 59.5 | 56.5 | 1 | 1 | 5 | 4 | 0 | 0 | 30 | 4 | 5 |
| 8/6 | 38.1°N | 125.7°W | 0500 | 98 | 25 | 11 | 03 | 1 | 1018.3 | 2 | 0.3 | 60.5 | 58.0 | 56.8 | 6 | 6 | 5 | 4 | 6 | 1 | 30 | 3 | 4 |

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS) (cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 8/6 | 37.8°N | 125.7°W | 1200 | 98 | 31 | 11 | 01 | 1 | 1017.6 | 7 | 0.3 | 62.3 | 60.0 | 60.0 | 3 | 3 | 4 | 4 | 0 | 0 | 30 | 3 | 2 |
| 8/6 | 37.1°N | 125.1°W | 1700 | 99 | 33 | 09 | 01 | 2 | 1018.6 | 2 | 1.0 | 63.0 | 60.2 | 60.9 | 7 | 7 | 5 | 3 | 0 | 0 | 35 | 2 | 2 |
| 8/6 | 36.8°N | 124.6°W | 2300 | 99 | 30 | 06 | 02 | 1 | 1018.6 | 4 | 0.0 | 64.0 | 60.0 | 60.1 | 1 | 1 | 4 | 4 | 0 | 0 | 35 | 3 | 2 |
| 8/7 | 36.8°N | 124.6°W | 0400 | 99 | 30 | 12 | 02 | 0 | 1017.6 | 7 | 0.2 | 61.7 | 60.0 | 59.0 | 0 | 0 | 0 | 9 | 0 | 0 | 35 | 3 | 3 |
| 8/7 | 36.8°N | 124.6°W | 1100 | 90 | 32 | 11 | 45 | 2 | 1016.9 | 7 | 0.3 | 60.0 | 60.0 | 59.0 | 9 | 9 | X | 0 | X | X | 32 | 2 | 2 |
| 8/7 | 36.6°N | 124.3°W | 1800 | 95 | 26 | 06 | 28 | 2 | 1019.0 | 2 | 1.9 | 64.0 | 63.0 | 60.5 | 8 | 8 | 4 | 3 | X | X | 30 | 2 | 2 |
| 8/7 | 36.1°N | 123.5°W | 2300 | 97 | 30 | 04 | 03 | 1 | 1018.3 | 7 | 0.3 | 64.5 | 62.0 | 62.0 | 7 | 7 | 4 | 3 | 0 | 0 | 30 | 3 | 2 |
| 8/8 | 36.3°N | 123.8°W | 0500 | 97 | 30 | 10 | 40 | 2 | 1018.0 | 2 | 0.7 | 63.0 | 60.1 | 60.2 | 8 | 8 | 5 | 3 | X | X | 30 | 3 | 2 |
| 8/8 | 36.1°N | 123.5°W | 1100 | 97 | 30 | 08 | 02 | 2 | 1018.0 | 4 | 0.0 | 62.0 | 59.5 | 60.2 | 8 | 8 | 5 | 3 | X | X | 30 | 2 | 2 |
| 8/8 | 36.2°N | 123.4°W | 1700 | 97 | 31 | 12 | 02 | 2 | 1018.6 | 2 | 1.0 | 62.5 | 59.5 | 60.5 | 8 | 8 | 4 | 3 | X | X | 30 | 2 | 2 |
| 8/8 | 35.3°N | 123.4°W | 2300 | 99 | 32 | 11 | 02 | 1 | 1018.0 | 7 | 0.5 | 64.8 | 61.0 | 61.5 | 5 | 3 | 5 | 4 | 6 | 0 | 32 | 2 | 2 |
| 8/9 | 34.8°N | 123.4°W | 0500 | 99 | 31 | 18 | 02 | 1 | 1016.9 | 7 | 0.5 | 62.5 | 59.5 | 61.7 | 1 | 1 | 5 | 5 | 0 | 0 | 30 | 2 | 2 |
| 8/9 | 34.8°N | 123.4°W | 1100 | 99 | 30 | 17 | 02 | 0 | 1016.3 | 7 | 0.3 | 62.5 | 60.0 | 61.5 | 3 | 3 | 1 | 4 | 0 | 0 | 30 | 2 | 2 |
| 8/9 | 34.8°N | 123.8°W | 1700 | 99 | 32 | 13 | 03 | 1 | 1017.3 | 2 | 0.3 | 63.0 | 60.0 | 61.0 | 3 | 2 | 2 | 4 | 0 | 2 | 32 | 3 | 3 |
| 8/9 | 34.8°N | 124.2°W | 2300 | 99 | 32 | 20 | 02 | 0 | 1016.3 | 7 | 0.5 | 64.2 | 60.5 | 63.0 | 1 | 1 | 2 | 4 | 0 | 0 | 30 | 3 | 4 |
| 8/10 | 34.7°N | 124.5°W | 0500 | 97 | 32 | 21 | 03 | 1 | 1015.9 | 5 | 1.5 | 63.5 | 62.3 | 62.5 | 8 | 8 | 4 | 4 | X | X | 30 | 3 | 4 |
| 8/10 | 34.5°N | 125.1°W | 1100 | 98 | 34 | 22 | 02 | 2 | 1015.6 | 7 | 0.7 | 62.0 | 59.5 | 62.5 | 8 | 8 | 5 | 4 | X | X | 34 | 3 | 4 |
| 8/10 | 34.3°N | 126.0°W | 1700 | 99 | 34 | 20 | 02 | 1 | 1017.6 | 2 | 1.0 | 70.0 | 60.5 | 63.8 | 3 | 3 | 2 | 4 | 0 | 0 | 35 | 3 | 4 |
| 8/10 | 34.2°N | 126.8°W | 2300 | 99 | 00 | 19 | 02 | 1 | 1017.3 | 7 | 0.7 | 66.5 | 61.0 | 65.5 | 5 | 2 | 4 | 4 | 5 | 0 | 01 | 3 | 3 |
| 8/11 | 34.0°N | 127.6°W | 0500 | 98 | 01 | 17 | 02 | 1 | 1017.3 | 2 | 0.9 | 65.0 | 61.2 | 65.0 | 7 | 7 | 2 | 3 | X | X | 01 | 3 | 4 |
| 8/11 | 34.0°N | 128.4°W | 1100 | 98 | 00 | 17 | 02 | 2 | 1017.3 | 4 | 0.0 | 65.0 | 61.0 | 65.5 | 4 | 4 | 2 | 4 | X | X | 00 | 3 | 4 |
| 8/11 | 33.7°N | 129.2°W | 1700 | 98 | 02 | 21 | 02 | 2 | 1019.6 | 2 | 1.2 | 67.5 | 63.0 | 66.0 | 8 | 8 | 4 | 4 | X | X | 00 | 3 | 4 |
| 8/11 | 33.6°N | 130.0°W | 2300 | 99 | 00 | 12 | 02 | 2 | 1020.0 | 4 | 0.0 | 68.0 | 63.2 | 66.6 | 7 | 7 | 5 | 4 | 0 | 0 | 00 | 3 | 3 |
| 8/12 | 33.3°N | 130.0°W | 0500 | 98 | 00 | 12 | 02 | 1 | 1021.0 | 2 | 0.5 | 67.5 | 63.2 | 67.5 | 5 | 5 | 5 | 4 | X | X | 00 | 3 | 3 |
| 8/12 | 33.1°N | 131.6°W | 1100 | 98 | 00 | 12 | 02 | 2 | 1020.7 | 7 | 0.2 | 67.5 | 64.0 | 68.0 | 6 | 6 | 5 | 4 | X | X | 00 | 3 | 2 |
| 8/12 | 33.0°N | 132.5°W | 1700 | 99 | 04 | 16 | 02 | 2 | 1022.4 | 2 | 0.9 | 68.5 | 64.0 | 68.2 | 8 | 8 | 5 | 4 | X | X | 04 | 2 | 2 |
| 8/12 | 32.7°N | 133.0°W | 2300 | 99 | 04 | 12 | 02 | 2 | 1022.0 | 7 | 0.7 | 69.0 | 62.7 | 69.0 | 5 | 5 | 4 | 4 | 0 | 0 | 06 | 2 | 3 |
| 8/13 | 32.3°N | 134.0°W | 0500 | 99 | 04 | 12 | 02 | 1 | 1023.4 | 3 | 1.0 | 69.5 | 64.0 | 68.7 | 2 | 2 | 1 | 4 | 0 | 0 | 05 | 2 | 2 |
| 8/13 | 31.9°N | 134.8°W | 1100 | 98 | 05 | 13 | 02 | 1 | 1022.7 | 4 | 0.0 | 68.5 | 63.5 | 69.0 | 8 | 8 | 4 | 4 | X | X | 05 | 2 | 2 |
| 8/13 | 31.7°N | 135.5°W | 1700 | 98 | 04 | 14 | 03 | 2 | 1023.7 | 2 | 0.5 | 70.0 | 62.0 | 69.8 | 7 | 7 | 4 | 3 | 0 | 0 | 04 | 2 | 2 |
| 8/13 | 31.4°N | 136.6°W | 2300 | 99 | 04 | 13 | 01 | 1 | 1022.7 | 7 | 0.3 | 71.5 | 66.0 | 70.3 | 3 | 1 | 1 | 3 | 4 | 0 | 03 | 2 | 2 |
| 8/14 | 31.0°N | 137.5°W | 0500 | 98 | 05 | 14 | 02 | 1 | 1023.0 | 2 | 0.7 | 70.2 | 63.1 | 69.2 | 6 | 4 | 2 | 3 | 6 | 1 | 04 | 3 | 3 |
| 8/14 | 30.6°N | 138.4°W | 1100 | 98 | 04 | 17 | 02 | 1 | 1022.0 | 7 | 1.0 | 69.8 | 62.6 | 69.8 | 5 | 5 | 2 | 3 | 4 | 0 | 04 | 3 | 3 |
| 8/14 | 30.2°N | 139.3°W | 1800 | 98 | 04 | 09 | 02 | 1 | 1022.7 | 2 | 0.3 | 72.0 | 64.5 | 70.7 | 6 | 4 | 4 | 4 | 1 | 8 | 01 | 3 | 3 |
| 8/14 | 29.9°N | 139.9°W | 2300 | 99 | 04 | 09 | 02 | 1 | 1021.3 | 7 | 0.7 | 74.3 | 65.5 | 71.6 | 6 | 3 | 2 | 3 | 8 | 0 | 04 | 3 | 3 |
| 8/15 | 29.5°N | 140.9°W | 0500 | 99 | 04 | 10 | 02 | 1 | 1020.7 | 5 | 0.3 | 71.0 | 64.0 | 72.5 | 6 | 6 | 2 | 3 | 4 | 1 | 04 | 3 | 3 |
| 8/15 | 29.0°N | 141.1°W | 1200 | 99 | 07 | 13 | 02 | 1 | 1019.6 | 7 | 0.7 | 69.7 | 64.0 | 71.5 | 5 | 4 | 4 | 4 | 4 | 0 | 04 | 3 | 3 |
| 8/15 | 28.7°N | 142.4°W | 1800 | 99 | 07 | 19 | 02 | 1 | 1020.3 | 1 | 0.7 | 72.5 | 65.5 | 72.2 | 5 | 4 | 2 | 4 | 6 | 0 | 08 | 3 | 3 |
| 8/15 | 28.3°N | 143.3°W | 2300 | 98 | 02 | 16 | 02 | 1 | 1019.3 | 7 | 0.5 | 73.0 | 66.0 | 73.5 | 6 | 6 | 2 | 3 | 6 | 0 | 12 | 3 | 3 |
| 8/16 | 28.0°N | 144.0°W | 0500 | 98 | 09 | 17 | 02 | 1 | 1019.3 | 4 | 0.0 | 72.5 | 67.5 | 73.5 | 4 | 3 | 4 | 4 | 4 | 8 | 10 | 3 | 3 |
| 8/16 | 27.6°N | 144.9°W | 1100 | 98 | 08 | 13 | 03 | 0 | 1019.6 | 7 | 0.2 | 71.2 | 67.0 | 74.8 | 3 | 3 | 2 | 4 | 0 | 0 | 34 | 3 | 3 |
| 8/16 | 26.9°N | 145.6°W | 1800 | 98 | 08 | 14 | 02 | 0 | 1021.0 | 2 | 0.7 | 73.0 | 67.5 | 73.0 | 4 | 4 | 2 | 4 | 0 | 0 | 32 | 3 | 3 |
| 8/16 | 26.6°N | 146.3°W | 2300 | 98 | 07 | 12 | 02 | 0 | 1020.0 | 7 | 0.9 | 74.5 | 68.0 | 73.5 | 2 | 1 | 1 | 4 | 1 | 1 | 10 | 3 | 3 |
| 8/17 | 26.3°N | 147.0°W | 0500 | 98 | 10 | 14 | 02 | 1 | 1020.0 | 4 | 0.0 | 73.5 | 69.2 | 74.6 | 6 | 6 | 2 | 3 | X | X | 10 | 3 | 3 |
| 8/17 | 25.8°N | 148.0°W | 1100 | 98 | 09 | 12 | 02 | 2 | 1020.3 | 4 | 0.0 | 73.5 | 67.0 | 74.0 | 5 | 5 | 2 | 3 | X | X | 09 | 3 | 3 |
| 8/17 | 25.5°N | 148.7°W | 1700 | 98 | 07 | 16 | 02 | 2 | 1021.7 | 2 | 0.7 | 75.3 | 68.0 | 74.3 | 5 | 4 | 4 | 4 | 2 | 0 | 07 | 3 | 4 |
| 8/17 | 25.2°N | 149.6°W | 2300 | 99 | 07 | 17 | 02 | 2 | 1021.7 | 6 | 1.0 | 78.8 | 71.0 | 75.4 | 6 | 5 | 2 | 3 | 6 | 0 | 08 | 2 | 3 |
| 8/18 | 24.8°N | 150.4°W | 0500 | 98 | 08 | 20 | 02 | 2 | 1021.0 | 5 | 0.0 | 74.5 | 70.0 | 75.0 | 6 | 6 | 2 | 3 | 6 | 0 | 08 | 3 | 3 |
| 8/18 | 24.4°N | 151.4°W | 1100 | 99 | 07 | 17 | 01 | 1 | 1020.7 | 7 | 0.9 | 74.5 | 70.5 | 75.0 | 3 | 3 | 1 | 5 | 0 | 0 | 07 | 3 | 3 |
| 8/18 | 24.0°N | 152.1°W | 1700 | 99 | 07 | 15 | 02 | 1 | 1020.3 | 2 | 0.9 | 75.8 | 71.0 | 75.9 | 6 | 6 | 2 | 3 | 0 | 2 | 07 | 3 | 3 |

Table 6.--Weather observations (USWB 1210-F), John R. Manning cruise 36 (NEPAS) (cont'd)

| Date, 1957 | Latitude | Longitude | Time, GCT | Visibility | Wind | | Weather | | Pressure | | | Temperature | | | Clouds | | | | | | Waves | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Direction | Speed, kt. | Present | Past | Bar. corr., mb. | Characteristic | Amt. change | Dry bulb, °F. | Wet bulb, °F. | Sea water, °F. | Total amount | Amount low | Type low | Height low | Type middle | Type high | Direction | Period | Height |
| 8/18 | 23.7°N | 152.9°W | 2300 | 99 | 07 | 18 | 02 | 1 | 1019.0 | 7 | 1.4 | 78.2 | 72.8 | 77.5 | 4 | 4 | 2 | 3 | 0 | 0 | 07 | 3 | 3 |
| 8/19 | 23.2°N | 153.6°W | 0500 | 98 | 07 | 21 | 15 | 1 | 1018.3 | 5 | 0.2 | 76.5 | 72.0 | 76.0 | 6 | 5 | 4 | 4 | X | X | 07 | 3 | 4 |
| 8/19 | 22.9°N | 154.4°W | 1100 | 98 | 07 | 18 | 02 | 1 | 1018.0 | 7 | 1.0 | 75.5 | 72.2 | 77.0 | 3 | 3 | 2 | 3 | 0 | 0 | 07 | 3 | 4 |
| 8/19 | 22.5°N | 155.4°W | 1800 | 98 | 07 | 21 | 02 | 0 | 1017.6 | 2 | 0.2 | 78.4 | 71.5 | 77.0 | 3 | 3 | 2 | 3 | 0 | 0 | 07 | 3 | 4 |
| 8/19 | 22.1°N | 156.1°W | 2300 | 97 | 07 | 23 | 03 | 1 | 1017.6 | 4 | 0.0 | 77.5 | 73.0 | 78.0 | 6 | 5 | 4 | 4 | 1 | 0 | 07 | 3 | 4 |
| 8/20 | 21.7°N | 156.8°W | 0500 | 98 | 09 | 19 | 03 | 1 | 1016.3 | X | XX | 78.0 | 73.0 | 77.4 | 7 | 5 | 2 | 3 | 6 | 2 | 10 | 3 | 5 |

Table 7.--Summary of observations made at the submarine photometer station, John R. Manning cruise 36 (NEPAS) June 11 - August 20, 1957

| Station | Date 1957 | Time | Position | | Photometer | | | | | | | | Secchi disc depth (m.) | Forel color | Cloud cover 1/ | Cloud type 1/ | Sea 1/ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude north | Longitude west | 50% level (m.) | Incident light ft.-c. | 10% level (m.) | Incident light ft.-c. | 5% level (m.) | Incident light ft.-c. | 1% level (m.) | Incident light ft.-c. | | | | | | |
| 1 | 6/12 | 1340 | 22°43' | 156°07' | - | 5250 | 53.5 | - | 89.0 | - | 141.0 | - | 44 | 3 | 6 | 3 | 4 | +10 zone time, boat rolling |
| 2 | 6/14 | 1340 | 26°55' | 152°08' | - | 11,250 | - | - | - | - | - | - | 32 | 1 | 2 | 1,6,8 | 3 | Photometer readings not recorded |
| 3 | 6/15 | 1340 | 29°11' | 149°52' | 3.5 | 7200 | 41.0 | - | 77.5 (74.8) 2/ | - | 129.0 (124.6) | - | 28 | 2 | 3 | 1,6,8 | 1 | - |
| 4 | 6/16 | 1340 | 31°27' | 147°20' | - | 9000 | - | - | - | - | - | - | 42 | 2 | 1 | 1,5 | 2 | Cable broke |
| 6 | 6/17 | 1440 | 33°52' | 145°01' | 11.0 | 9750 | 24.0 | - | 71.0 (69.9) | - | 105.5 (103.9) | - | 48 | 2 | 3 | 2,5,8 | 2 | +9 zone time, 50% and 10% not reliable |
| 8 | 6/18 | 1440 | 36°00' | 143°00' | 11.0 | 5640 | 42.0 | 2250 | 64.0 | 2250 | 112.0 | 5640 | 32 | 2 | 8 | 5,6 | 2 | - |
| 10 | 6/19 | 1440 | 36°42' | 141°56' | 2.0 | 5610 | 41.0 | 5610 | 66.0 (65.0) | 9000 | 116.0 (114.2) | 9000 | 28 | 2 | 7 | 6 | 5 | - |
| 12 | 6/20 | 1440 | 37°22' | 140°59' | 3.0 | 5610 | 35.0 | - | 72.0 | - | 132.0 | - | 30 | 2 | 7 | 0,6 | 2 | - |
| 13A | 6/21 | 1440 | 39°18' | 138°39' | 3.5 | 3900 | 29.0 | - | 49.0 | - | 104.0 (102.4) | - | 28 | 2 | 8 | 6 | 1 | - |
| 14 | 6/22 | 0730 | 39°43' | 138°02' | 1.5 | 1440 | 31.5 | - | 67.5 | - | 111.0 (110.5) | - | 28 | 2 | 8 | 6 | 3 | 1% not reliable |
| 15 | 6/22 | 1440 | 40°23' | 137°08' | 10.0 | 7500 | 28.5 | - | 46.0 (45.8) | - | 83.0 (78.0) | - | 24 | 3 | 7 | 6 | 2 | 7,500 is an average of 7,800 and 7,200 |
| 17 | 6/23 | 1440 | 41°10' | 135°04' | 2.0 | 7800 | 33.0 (32.9) | - | 49.0 (48.8) | - | 102.0 (101.6) | - | 36 | 2 | 2 | 6 | 3 | Boat rolling |
| 19 | 6/24 | 1540 | 39°20' | 134°57' | 2.0 | 6900 | 45.0 | 7200 | 72.0 (71.7) | 7200 | 149.0 (148.4) | 7200 | 30 | 2 | 6 | 6 | 2 | +8 zone time |
| 21 | 6/25 | 0800 | 39°48' | 134°53' | 5.0 | 5250 | 47.0 | 7200 | 61.0 | 5700 | - | - | 42 | 1.5 | 2 | 6 | 1 | Cable broke |
| 22 | 6/25 | 1530 | 38°55' | 134°50' | 10.0 | 7800 | - | - | - | - | - | - | 48 | 2 | 4 | 8 | 1 | Cable broke |
| 24A | 6/26 | 0800 | 38°24' | 134°26' | 2.0 | 3750 | - | - | - | - | - | - | 36 | 1.5 | 6 | 6,8 | 2 | Cable broke |

1/ Coded according to U.S.N.H.O. Pub. 606-c (1956).

2/ Brackets enclose values corrected for wire angles.

Table 7.--Summary of observations made at the submarine photometer station, John R. Manning cruise 36 (NEPAS) June 11 - August 20, 1957 (cont'd)

| Station | Date 1957 | Time | Position | | Photometer | | | | | | | | Secchi disc depth (m.) | Forel color | Cloud cover 1/ | Cloud type 1/ | Sea 1/ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude north | Longitude west | 50% level (m.) | Incident light ft.-c. | 10% level (m.) | Incident light ft.-c. | 5% level (m.) | Incident light ft.-c. | 1% level (m.) | Incident light ft.-c. | | | | | | |
| 24A | 6/26 | 1540 | 37°36' | 134°00' | - | - | - | - | - | - | - | - | 40 | 2 | 2 | 6,8 | 2 | Cable broke |
| - | 6/27 | 0800 | 36°31' | 133°48' | - | - | - | - | - | - | - | - | 28 | 2 | 6 | 8 | 2 | Cable broke |
| 25 | 6/27 | 1540 | 35°48' | 133°46' | 8.0 | 4200 | - | 4200 | - | 5400 | - | 5400 | 34 | 2 | 7 | 6 | 2 | 10%, 5%, and 1% not reliable |
| 27 | 6/28 | 1540 | 32°38' | 133°32' | - | - | 45.0 (44.8) | 10,800 | 69.0 (66.6) | 11,150 | - | 3750 | 38 | 2 | 6 | 6 | 4 | Secchi disc 60° angle boat rolling |
| 29 | 6/29 | 1540 | 31°33' | 132°16' | 4.5 | 3900 | 44.0 (43.3) | 5100 | 77.0 (76.6) | 3750 | - | 6000 | - | - | 8 | 6 | 5 | Rough sea, intermittent cloudiness |
| 31 | 6/30 | 1540 | 32°54' | 129°38' | 4.0 | 3750 | 49.0 | 3450 | 70.0 (68.9) | 3450 | - | 2400 | 30 | 2 | 8 | 6 | 5 | - |
| 33 | 7/1 | 1540 | 34°14' | 126°47' | 6.0 | 3450 | 30.0 | 3900 | 51.0 | 3450 | 72.0 (71.7) | 3900 | 28 | 2 | 6 | 1,6,8 | 4 | Intermittent cloudiness |
| 35 | 7/2 | 0940 | 34°35' | 126°08' | 1.0 | 9750 | 22.5 | 10,500 | 50.0 | 9750 | 85.0 (83.7) | 10,500 | 28 | 2 | 4 | 6,8 | 3 | - |
| 36 | 7/2 | 1540 | 34°49' | 125°32' | 12.0 | 10,650 | 24.5 | 9750 | 39.5 | 7500 | 90.0 (86.9) | 7800 | 24 | 4 | 3 | 6,8 | 3 | - |
| 38 | 7/3 | 1540 | 34°56' | 127°58' | 2.5 | 3600 | 37.5 (37.2) | 3294 | 76.0 (73.4) | 2100 | - | 3294 | - | - | 7 | 6 | 4 | - |
| 40 | 7/4 | 1540 | 35°05' | 127°36' | - | - | 28.0 | 1200 | 88.0 (86.7) | 1350 | - | 1440 | 22 | 2 | 7 | 4,6 | 5 | Rain |
| 42 | 7/5 | 1545 | 36°23' | 130°32' | 3.0 | 3600 | 47.0 (46.3) | 11,250 | 72.0 (69.5) | 3900 | - | 3900 | 36 | 2 | 5 | 6,8 | 4 | Fog patches |
| 44 | 7/6 | 0940 | 36°50' | 129°59' | 7.0 | 3750 | 31.0 | 7800 | 72.0 | 3750 | - | 4686 | 30 | 2 | 5 | 8 | 2 | - |
| 45 | 7/6 | 1540 | 37°09' | 129°26' | 3.0 | 2835 | 41.5 | 2376 | 89.5 | 1920 | - | 1920 | 34 | 2 | 8 | 6 | 4 | - |
| 46 | 7/7 | 0950 | 37°27' | 129°02' | 2.0 | 11,250 | 41.0 | 11,250 | 60.6 | 11,250 | - | 11,250 | 34 | 2 | 3 | 8 | 3 | Boat rolling |
| 47 | 7/7 | 1540 | 37°47' | 128°31' | 5.0 | 7500 | 32.0 | 9375 | 54.0 | 9375 | - | 9375 | - | - | 0 | X | 3 | - |
| 48A | 7/8 | 1540 | 39°22' | 126°16' | 8.0 | 7500 | 32.0 (31.9) | 7800 | 57.0 (56.1) | 7650 | - | 7500 | - | - | 2 | 6 | 3 | - |
| 49A | 7/9 | 1540 | 39°59' | 126°38' | 7.5 | 9375 | 31.0 | 8436 | 52.0 | 7500 | - | 8436 | 32 | 2 | 1 | 6 | 3 | - |

1/ Coded according to U.S.N.H.O. Pub. 606-c (1956).

Table 7.--Summary of observations made at the submarine photometer station, John R. Manning cruise 36 (NEPAS) June 11 - August 20, 1957 (cont'd)

| Station | Date 1957 | Time | Position | | Photometer | | | | | | | | Secchi disc depth (m.) | Forel color | Cloud cover 1/ | Cloud type 1/ | Sea 1/ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude north | Longitude west | 50% level (m.) | Incident light ft.-c. | 10% level (m.) | Incident light ft.-c. | 5% level (m.) | Incident light ft.-c. | 1% level (m.) | Incident light ft.-c. | | | | | | |
| 51 | 7/10 | 0940 | 40°02' | 127°07' | 0.5 | 2835 | 64.0 | 1920 | 67.0 (66.7) | 1920 | - | 2376 | 32 | 2 | 8 | 6 | 3 | - |
| 53 | 7/11 | 1540 | 40°07' | 131°06' | - | - | - | - | 58.0 | 9365 | - | 9365 | 36 | 2 | 3 | 1,4,5 | 2 | - |
| 55 | 7/12 | 1540 | 40°16' | 132°42' | - | 1560 | 45.0 (44.8) | 1560 | 85.0 (82.1) | 1200 | - | 1680 | 30 | 2 | 8 | 6 | 4 | Rain and fog, rolling |
| 57 | 7/13 | 1540 | 41°58' | 129°57' | 0 | 2835 | 27.0 (25.9) | 2835 | 52.0 (51.8) | 2835 | - | 2376 | 28 | 3 | 6 | 6,8 | 3 | - |
| 59 | 7/14 | 1540 | 43°03' | 128°09' | 6.0 | 4686 | 22.0 | 5622 | 41.0 (40.8) | 7500 | - | 7500 | 28 | 3 | 5 | 6,8 | 5 | - |
| 61 | 7/15 | 1540 | 44°50' | 126°11' | 1.2 | 2835 | 16.0 | 7500 | 31.0 (30.9) | 7500 | - | 6564 | 22 | 5 | 5 | 4,5,8 | 3 | Intermittent sunshine |
| 64 | 7/23 | 0940 | 44°18' | 126°38' | 0.6 | 2915 | 16.5 | 3294 | 35.5 | 3294 | - | 3522 | 20 | 6 | 9 | 6 | 2 | - |
| 65 | 7/23 | 1540 | 43°51' | 127°22' | 5.0 | 5625 | 30.0 | 4686 | 50.0 | 5625 | - | 4686 | 32 | 3 | 6 | 6 | 3 | - |
| 66 | 7/24 | 0800 | 43°43' | 127°51' | - | - | 30.0 | 2835 | 68.0 | 2835 | - | 2835 | 32 | 3 | 5 | 4,6,8 | 2 | - |
| 67 | 7/24 | 1540 | 43°13' | 127°12' | 4.0 | 7500 | 23.0 | 7500 | 41.0 | 7500 | - | 7500 | 26 | 4 | 3 | 8 | 3 | - |
| 69 | 7/25 | 0940 | 42°05' | 129°12' | - | - | 12.0 | 7500 | 40.0 | 7500 | - | 7500 | 24 | 3 | 6 | 4,6,8 | 3 | - |
| 70 | 7/25 | 1540 | 41°37' | 129°54' | 4.5 | 7500 | 34.0 | 7500 | 53.0 (52.2) | 4696 | - | - | 28 | 2.5 | 6 | 6,8 | 4 | - |
| 72 | 7/26 | 0940 | 40°52' | 131°09' | - | 11,250 | 40.0 | 2529 | 74.5 (72.0) | 2835 | - | 3750 | 28 | 2 | 8 | 6 | 5 | - |
| 73 | 7/26 | 1540 | 40°23' | 131°19' | 2.0 | 3750 | 32.0 | 3294 | 70.0 (63.4) | 6000 | - | 6000 | 24 | 3 | 3 | 6,8 | 5 | - |
| 75 | 7/27 | 0940 | 38°18' | 130°53' | 1.0 | 2376 | 24.0 | 3750 | 70.8 (69.7) | 3750 | - | 9375 | 28 | 2 | 7 | 6 | 5 | - |
| 77 | 7/27 | 1550 | 38°26' | 130°17' | 4.0 | 11,250 | 40.0 | 3750 | 66.0 (65.0) | 3750 | - | 3750 | 30 | 2 | 6 | 6 | 3 | - |
| 79 | 7/28 | 0940 | 38°46' | 128°37' | 0 | 1920 | 37.0 (36.8) | 1440 | 74.5 (72.0) | 1920 | - | 1920 | 30 | 2 | 6 | 6 | 3 | - |
| 80 | 7/28 | 1540 | 38°39' | 128°40' | 2.0 | 1920 | 43.0 | 1920 | 75.0 (73.9) | 2835 | - | 6000 | 30 | 2 | 8 | 5 | 4 | - |

1/ Coded according to U.S.N.H.O. Pub. 606-c (1956).

Table 7.--Summary of observations made at the submarine photometer station, John R. Manning cruise 36 (NEPAS) June 11 - August 20, 1957 (cont'd)

| Station | Date 1957 | Time | Position | | Photometer | | | | | | | | Secchi disc depth (m.) | Forel color | Cloud cover 1/ | Cloud type 1/ | Sea 1/ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude north | Longitude west | 50% level (m.) | Incident light ft.-c. | 10% level (m.) | Incident light ft.-c. | 5% level (m.) | Incident light ft.-c. | 1% level (m.) | Incident light ft.-c. | | | | | | |
| 81 | 7/29 | 0900 | 38°46' | 128°36' | - | - | 32.0 | 7500 | 56.0 | 7500 | - | 7500 | 34 | 2 | 7 | 8 | 2 | - |
| 82 | 7/29 | 1540 | 38°56' | 127°51' | 5.0 | 6000 | 27.0 | 6000 | 54.0 | 6000 | - | 6000 | 28 | 2.5 | 6 | 6 | 3 | - |
| 83 | 7/30 | 1640 | 39°01' | 126°26' | 2.0 | 3750 | 31.0 | 3750 | 62.0 | 3750 | - | 3750 | 28 | 3 | 6 | 6 | 3 | - |
| 83 3/ | 7/31 | 1550 | 38°58' | 127°28' | 5.0 | 7500 | 30.0 | 7500 | 53.0 (52.8) | 7500 | - | 7500 | 26 | 3 | 3 | 6,8 | 3 | - |
| 85 | 8/3 | 0940 | 38°56' | 127°11' | - | 7500 | - | 7500 | 37.0 (36.8) | 11,250 | - | 7500 | 24 | 4 | 7 | 2,6 | 2 | - |
| 86 | 8/3 | 1540 | 38°53' | 127°04' | 8.0 | 7500 | 25.0 | 7500 | 40.0 | 7500 | - | 9366 | 24 | 5 | 3 | 2,6 | 3 | 50% not reliable |
| 88 | 8/4 | 0940 | 38°56' | 125°42' | - | 7500 | - | 9366 | 46.0 | 9366 | - | 9366 | 26 | 3.5 | 1 | 8 | 2 | - |
| 89 | 8/4 | 1540 | 38°57' | 126°10' | 6.0 | 7500 | 25.0 | 7500 | 45.0 | 7500 | - | 7500 | 24 | 4 | 3 | 3,4,6,8 | 6 | - |
| 91 | 8/5 | 0940 | 38°14' | 125°40' | - | 7500 | 21.0 | 3291 | 55.5 | 2376 | - | 2376 | 20 | 5 | 7 | 6 | 4 | - |
| 92 | 8/5 | 1215 | 38°05' | 125°25' | 8.0 | 9366 | 17.0 | 9366 | 22.7 | 9366 | 68.0 (67.0) | 9366 | 16 | 5 | 2 | 6 | 5 | - |
| 93 | 8/5 | 1540 | 38°14' | 125°44' | 5.0 | 7500 | 24.0 | 7500 | 34.0 | 7500 | - | 7500 | 22 | 4 | 1 | 6 | 5 | - |
| 95 | 8/6 | 0940 | 37°06' | 125°07' | - | 7500 | - | 9366 | 30.0 | 9366 | - | 9366 | 24 | 4 | 4 | 6 | 2 | - |
| 96 | 8/6 | 1210 | 36°58' | 124°56' | 3.0 | 3750 | 16.0 | 3750 | 41.0 | 3750 | - | 3750 | 18 | 5 | 7 | 6 | 2 | - |
| 98 | 8/6 | 1540 | 36°45' | 124°34' | 4.0 | 7500 | 15.0 | 7500 | 26.0 | 7500 | - | 7500 | 20 | 5 | 1 | 6 | 2 | - |
| 100 | 8/7 | 0950 | 36°35' | 124°17' | - | 7500 | 11.0 | 6561 | 32.0 | 5625 | - | 7500 | - | - | 8 | 6 | 2 | Fog thin |
| 101 | 8/7 | 1540 | 36°45' | 124°34' | 5.0 | 5625 | 19.0 | 5625 | 35.0 | 5625 | - | 5625 | 22 | 4 | 6 | 6 | 2 | - |
| 102 | 8/8 | 0815 | 36°08' | 123°24' | - | 1920 | 20.0 | 1920 | 40.0 | 1920 | - | 1920 | 20 | 4 | 8 | 6 | 2 | - |
| 103 | 8/8 | 1540 | 35°19' | 123°23' | - | 3750 | 8.0 | 3750 | 17.0 | 3750 | - | 3750 | 10 | 5 | 6 | 6 | 2 | - |
| 104 | 8/9 | 0940 | 34°47' | 123°42' | - | 9375 | - | 9375 | 14.5 | 9375 | - | 9375 | 14 | 5 | 2 | 1,6 | 3 | - |
| 105 | 8/9 | 1555 | 34°49' | 124°10' | 5.0 | 7500 | 22.0 (21.9) | 7500 | 36.0 (35.9) | 7500 | - | 7500 | 22 | 3 | 1 | 8 | 4 | - |
| 107 | 8/10 | 0940 | 34°17' | 126°05' | - | 9375 | - | 9375 | 55.0 | 9375 | - | 7500 | 30 | 2.5 | 8 | 6 | 4 | - |
| 108 | 8/10 | 1540 | 34°12' | 126°52' | 2.0 | 2376 | 38.0 | 3750 | 62.0 | 5625 | - | 4696 | 32 | 2 | 6 | 4,6,8 | 4 | 50% not reliable |

1/ Coded according to U.S.N.H.O. Pub. 606-c (1956).

3/ 24-hour gill-net station.

Table 7.--Summary of observations made at the submarine photometer station, John R. Manning cruise 36 (NEPAS) June 11 - August 20, 1957 (cont'd)

| Station | Date 1957 | Time | Position | | Photometer | | | | | | | | Secchi disc depth (m.) | Forel color | Cloud cover 1/ | Cloud type 1/ | Sea 1/ | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude north | Longitude west | 50% level (m.) | Incident light ft.-c. | 10% level (m.) | Incident light ft.-c. | 5% level (m.) | Incident light ft.-c. | 1% level (m.) | Incident light ft.-c. | | | | | | |
| 110 | 8/11 | 0940 | 33°41' | 129°14' | 1.0 | 3750 | 47.0 (46.8) | 3750 | 88.0 (86.7) | 4696 | - | 4696 | 30 | 2 | 8 | 6,8 | 4 | 50% not reliable |
| 111 | 8/11 | 1540 | 33°33' | 130°03' | 6.0 | 5625 | 40.0 | 6561 | 76.0 | 6561 | - | 6561 | 34 | 1.5 | 7 | 6 | 3 | - |
| 113 | 8/12 | 0940 | 33°00' | 132°28' | 3.0 | 3750 | 32.0 | 3750 | 72.0 | 3750 | - | 4696 | 36 | 1.5 | 8 | 6 | 3 | - |
| 114 | 8/12 | 1440 | 31°24' | 133°45' | - | 9375 | - | 9375 | 5.0 | 9375 | - | 9375 | 28 | 2 | 5 | 6 | 3 | - |
| 116 | 8/13 | 0850 | 31°40' | 135°48' | 3.5 | 3750 | 53.0 | 3750 | 72.0 (69.5) | 4696 | - | 4696 | 30 | 2 | 8 | 6 | 3 | - |
| - | 8/13 | 1440 | 31°22' | 136°37' | - | - | - | - | - | - | - | - | 32 | 2 | 2 | 4,8 | 3 | Cable broke |
| - | 8/14 | 1440 | 29°51' | 140°03' | - | 7500 | - | - | - | - | - | - | 28 | 2 | 6 | 4,8 | 3 | +9 zone time, photometer reading |
| - | 8/15 | 1440 | 28°18' | 143°16' | - | 7500 | - | - | - | - | - | - | 32 | 2 | 6 | 6,8 | 3 | Abandoned |
| - | 8/16 | 1440 | 26°35' | 146°16' | - | 11,250 | - | - | - | - | - | - | 38 | 2 | 2 | 1,5,8 | 3 | - |
| - | 8/17 | 1340 | 25°11' | 149°40' | - | 11,250 | - | - | - | - | - | - | 36 | 2 | 6 | 6,8 | 3 | +10 zone time, angle 15° |
| - | 8/18 | 1340 | 23°39' | 152°55' | - | 11,250 | - | - | - | - | - | - | 34 | 2 | 3 | 6,8 | 3 | Angle 30° |
| - | 8/19 | 1340 | 22°07' | 156°06' | - | 10,500 | - | - | - | - | - | - | 34 | 2 | 6 | 6,8 | 4 | - |

1/ Coded according to U.S.N.H.O. Pub. 606-c (1956).

Table 8.--Secchi disc data - NEPAS contract vessels

| Vessel | Time LCT | Date | Latitude north | Longitude west | Secchi disc m. |
|---|---|---|---|---|---|
| Lancing | 1200 | 7/22 | 45°03' | 126°22' | 16 |
| Track 3 | 1200 | 7/23 | 44°56' | 128°30' | 19 |
| | 1200 | 7/24 | 45°05' | 129°18' | 14 |
| | 1200 | 7/25 | 45°00' | 131°35' | 15 |
| | 1200 | 7/26 | 45°00' | 132°54' | 12 |
| | 1200 | 7/27 | 44°20' | 133°25' | 11 |
| | 1200 | 7/28 | 44°32' | 131°28' | 17 |
| | 1200 | 7/29 | 44°19' | 130°15' | 13 |
| | 1200 | 7/30 | 44°19' | 128°20' | 16 |
| | 1200 | 7/31 | 44°20' | 126°13' | 12 |
| Gypsy | 1200 | 7/22 | 43°35' | 125°48' | 16 |
| Track 4 | 1215 | 7/23 | 43°34' | 127°45' | 27 |
| | 1200 | 7/24 | 43°43' | 128°58' | 25 |
| | 1200 | 7/25 | 43°38' | 130°35' | 14 |
| | 1200 | 7/26 | 43°43' | 132°15' | 17 |
| | 1200 | 7/27 | 43°28' | 133°25' | 17 |
| | 1200 | 7/28 | 42°58' | 132°03' | 21 |
| | 1200 | 7/29 | 42°56' | 130°20' | 21 |
| | 1200 | 7/30 | 43°02' | 128°37' | 24 |
| | 1200 | 7/31 | 42°56' | 126°51' | 21 |
| Flicker | ca. 1200 | 7/22 | 42°20' | 126°04' | 20 |
| Track 5 | " | 7/23 | 43°20' | 127°46' | 20 |
| | " | 7/24 | 42°20' | 129°21' | 19 |
| | " | 7/25 | 42°21' | 130°56' | 18 |
| | " | 7/26 | 42°22' | 131°34' | 15 |
| | " | 7/27 | 41°40' | 132°39' | 20 |
| | " | 7/28 | 41°36' | 130°53' | 22 |
| | " | 7/29 | 41°30' | 129°13' | 16 |
| | " | 7/30 | 41°36' | 127°45' | 20 |
| | " | 7/31 | 41°40' | 126°18' | 22 |
| Lynn Ann | 1330 | 7/27 | 40°51' | 132°52' | 22 |
| Track 6 | 1130 | 7/28 | 40°20' | 131°54' | 21 |
| | 1215 | 7/29 | 40°20' | 130°19' | 16 |
| | 1200 | 7/30 | 41°26' | 128°27' | 24 |
| | 1215 | 7/31 | 40°22' | 126°42' | 22 |
| Rowland R. Sr. | 1230 | 7/22 | 39°37' | 125°35' | 17 |
| Track 7 | 1205 | 7/23 | 39°44' | 127°00' | 22 |
| | 1300 | 7/24 | 39°36' | 128°30' | 25 |
| | 1240 | 7/25 | 40°00' | 129°16' | 30 |
| | 1210 | 7/26 | 39°43' | 131°24' | 24 |
| | 1205 | 7/27 | 39°21' | 131°11' | 30 |
| | 1205 | 7/28 | 38°45' | 131°57' | 40 |
| | 1205 | 7/29 | 39°00' | 130°05' | 28 |
| | 1208 | 7/30 | 38°53' | 128°25' | 29 |
| | 1205 | 7/31 | 38°56' | 127°22' | 25 |
| Allen Cody | 1200 | 7/23 | 38°15' | 125°05' | 14 |
| Track 8 | 1200 | 7/24 | 38°18' | 126°32' | 15 |
| | 1200 | 7/25 | 38°22' | 127°49' | 17 |
| | 1200 | 7/26 | 38°23' | 129°31' | 20 |
| | 1200 | 7/27 | 38°21' | 131°10' | 19 |

Table 8.--Secchi disc data - NEPAS contract vessels (cont'd)

| Vessel | Time LCT | Date | Latitude north | Longitude west | Secchi disc m. |
|---|---|---|---|---|---|
| Allen Cody | 1200 | 7/28 | 37°36' | 129°55' | 22 |
| Track 8 | 1200 | 7/29 | 37°37' | 128°22' | 22 |
| | 1200 | 7/30 | 37°40' | 126°56' | 16 |
| | 1200 | 7/31 | 37°40' | 125°34' | 16 |
| Tuna Clipper | 1200 | 7/22 | 37°00' | 123°30' | 8 |
| Track 9 | | | | | |
| Luwella | 1200 | 7/22 | 35°45' | 122°40' | 16 |
| Track 10 | 1200 | 7/23 | 35°45' | 123°37' | 18 |
| | 1200 | 7/24 | 35°32' | 124°39' | 18 |
| | 1200 | 7/25 | 35°35' | 125°14' | 22 |
| | 1200 | 7/26 | 35°45' | 127°40' | 21 |
| | 1200 | 7/27 | 35°45' | 129°24' | 26 |
| | 1200 | 7/28 | 35°02' | 128°25' | 30 |
| | 1200 | 7/29 | 35°07' | 126°47' | 33 |
| | 1200 | 7/30 | 34°52' | 125°00' | 26 |
| | 1200 | 7/31 | 34°55' | 123°20' | 17 |
| | 1200 | 8/1 | 34°49' | 121°48' | 13 |

Table 9.--Station curves and observed oceanographic data
Hugh M. Smith cruise 40

Notes on Oceanographic Station Curves

Thermosteric anomaly (oblique lines) are in centiliters per ton (Montgomery 1954). Where temperatures of paired thermometers differed by more than 0.05°C. below 300 m. or more 0.10°C. above 300 m., both values are plotted and designated by the symbol ⩓ ⩓ . The other variables are plotted for each of the temperature values, see station 12. When the station curve is not drawn through a plotted value, it is considered a gross error and not used.

Explanatory code for station curves:

⩓ Reversing thermometer temperatures °C.

• BT temperature °C.

⊡ Salinity ‰.

⩛ Dissolved oxygen ml./L.

⊙ Inorganic phosphate μg. at./L.

Notes on Observed Oceanographic Data

Where more than one cast was made on a station, they are separated by a horizontal line. The cast number is indicated by a Roman numeral in the margin.

Where the corrected, paired, protected thermometer readings differed by more than 0.05°C. below 300 m. or more than 0.10°C. above 300 m., both temperature values are tabulated and the depth and salinity are repeated. Delta-t calculated using each temperature value is carried.

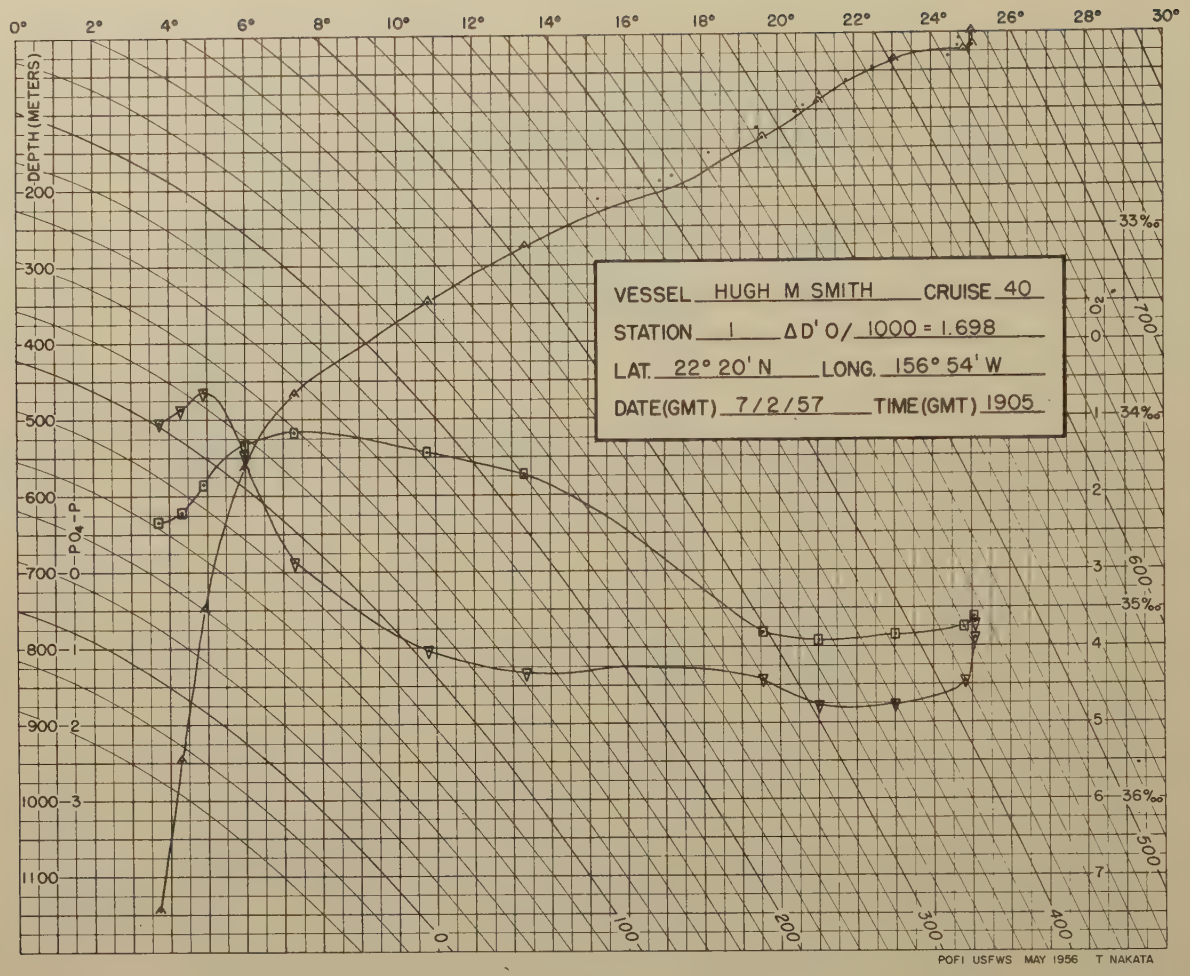
Explanatory code for tabulated data:

NG - The value or line is in error and is discarded.

NS - This water sample was lost.

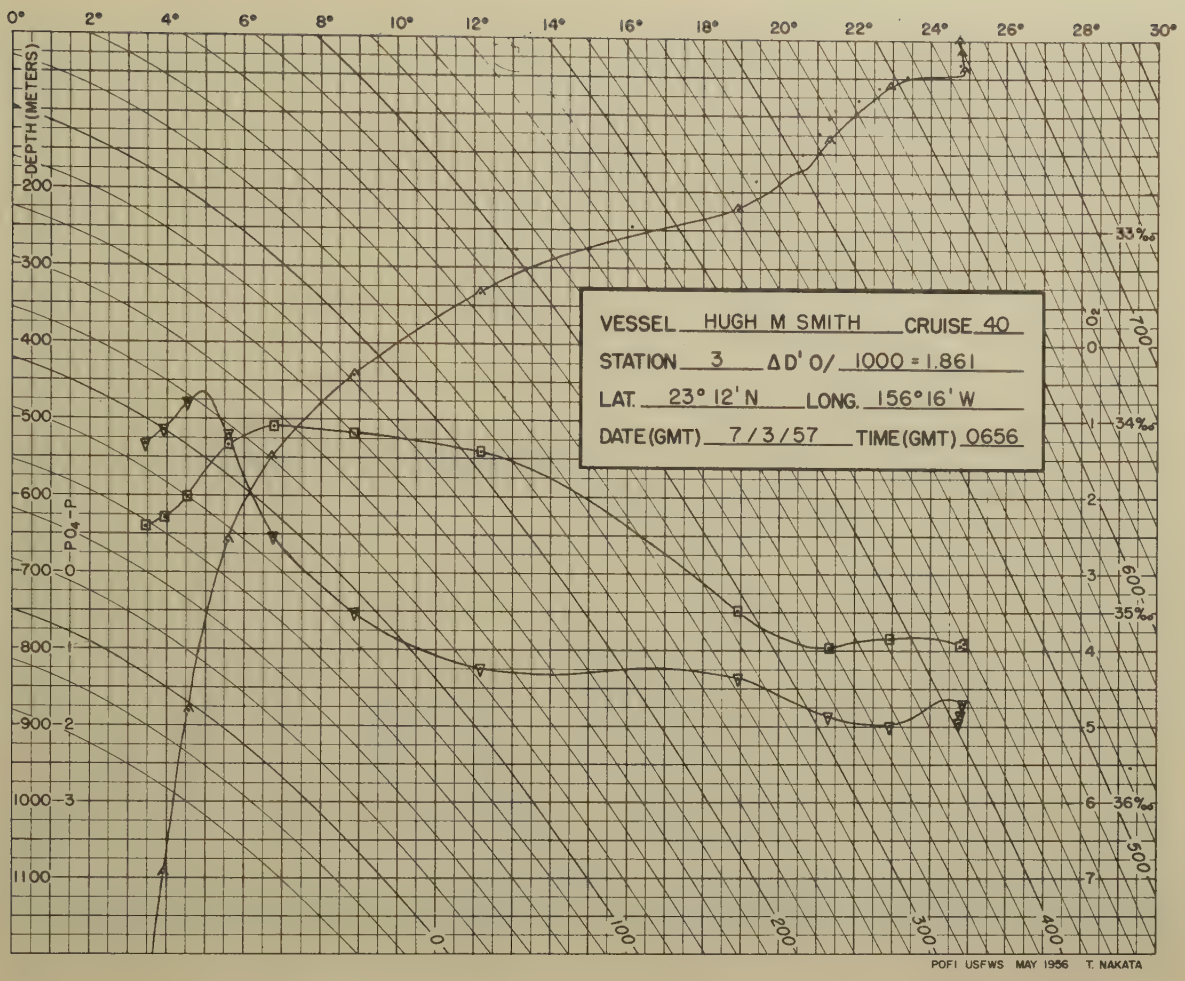
Q - The value seems questionable but was used in construction of the station curve.

P - The value is questionable and while carried was not used in drawing the station curve.


VESSEL HUGH M SMITH CRUISE 40
STATION 1 ΔD' O/ 1000 = 1.698
LAT. 22° 20' N LONG. 156° 54' W
DATE(GMT) 7/2/57 TIME(GMT) 1905
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

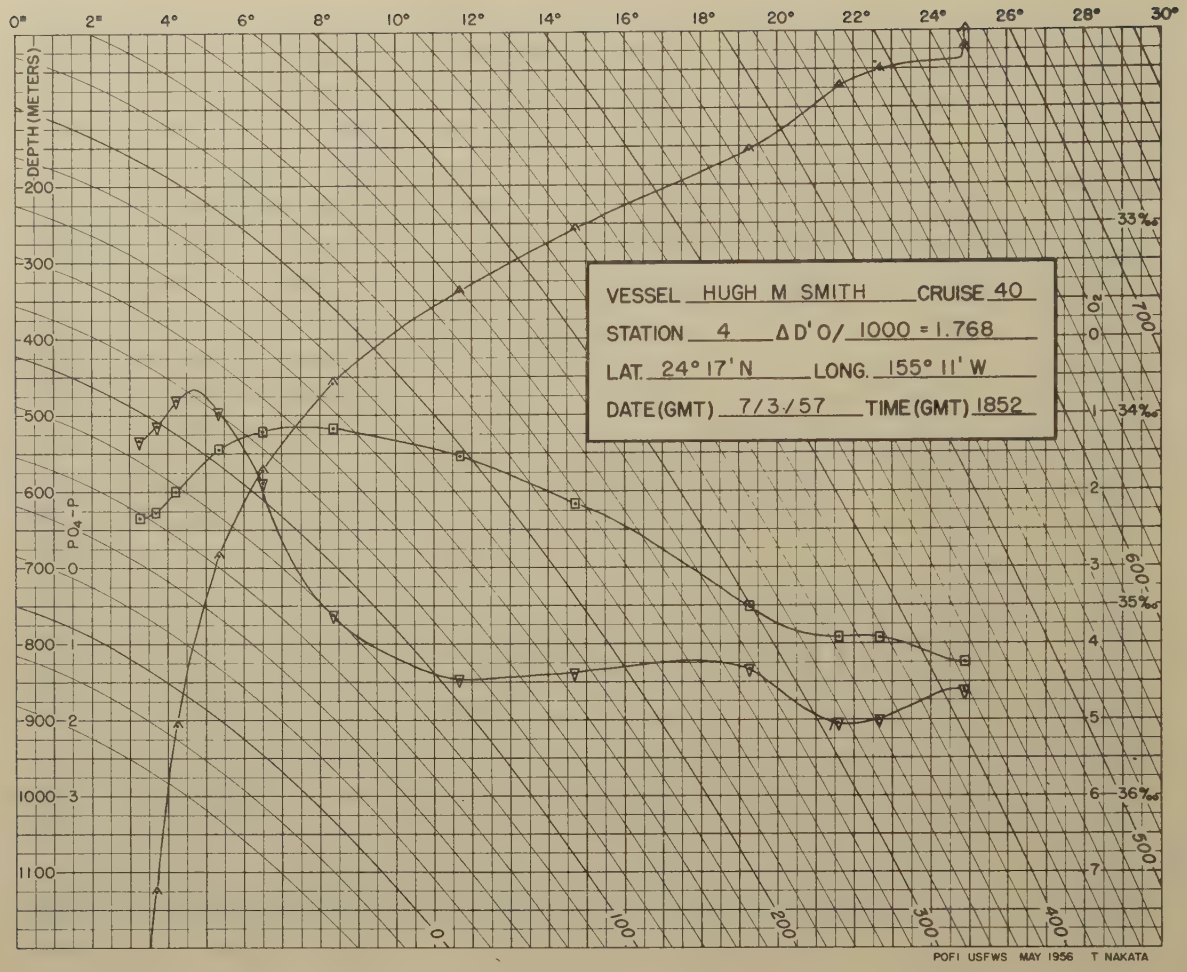
Weather: 02, cloud coverage 5. Wind: 080°, 21 kt. Sea: 5-8 ft. Wire angle: 55°, 40°.
BT slide: 1. Dry bulb: 77.7°F. Wet bulb: 71.3°F. Barometric pressure: 1021 mb.

| | Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 25.08 | 35.05 | 451.7 | 3.68 | - |
| | 16 | 25.09 | 35.07 | 450.4 | 3.90 | - |
| | 21 | 24.83 | 35.10 | 440.9 | 4.48 | - |
| | 32 | 23.02 | 35.14 | 386.8 | 4.76 | - |
| | 87 | 21.04 | 35.17 | 332.0 | 4.78 | - |
| I | 137 | 19.59 | 35.12 | 298.8 | 4.43 | - |
| II | 277 | 13.35 | 34.29 | 221.4 | 4.36 | - |
| | 349 | 10.81 | 34.18 | 183.5 | 4.04 | - |
| | 469 | 7.29 | 34.07 | 138.1 | 2.86 | - |
| | 564 | 5.98 | 34.14 | 116.3 | 1.46 | - |
| | 751 | 4.92 | 34.34 | 89.3 | 0.63 | - |
| | 948 | 4.32 | 34.49 | 71.8 | 0.88 | - |
| | 1146 | 3.74 | 34.54 | 62.4 | 1.06 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 3 ΔD' O/ 1000 = 1.861
LAT. 23° 12' N LONG. 156° 16' W
DATE (GMT) 7/3/57 TIME (GMT) 0656
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

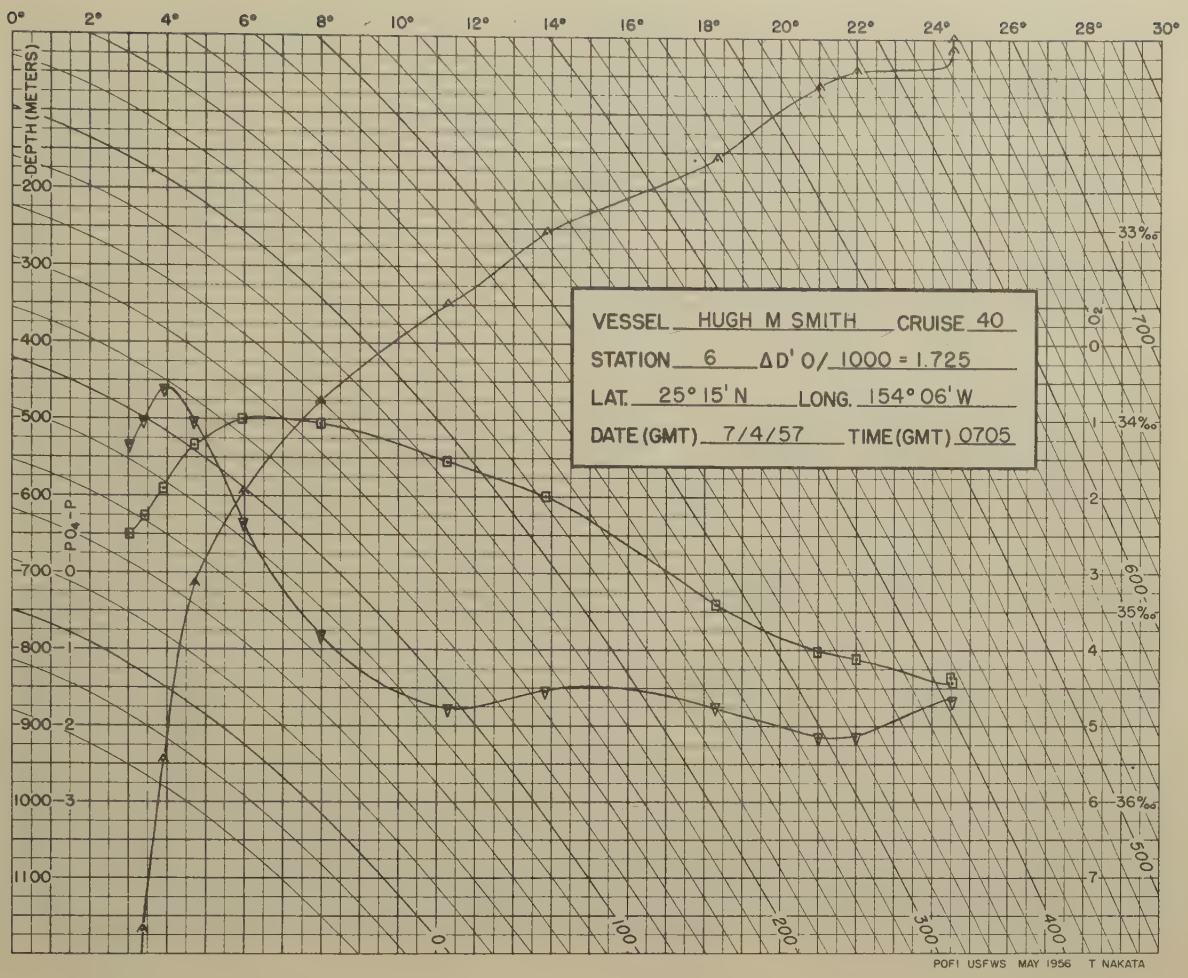
Weather: 02, cloud coverage 7. Wind: 060°, 22 kt. Sea: 3-5 ft. Wire angle: 30°.
BT slide: 6. Dry bulb: 76.8°F. Wet bulb: 70.3°F. Barometric pressure: 1021 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 24.78 | 35.16 | 435.0 | 4.94 | - |
| 14 | 24.80 | 35.17 | 434.9 | 4.86 | - |
| 37 | 24.86 | 35.16 | 437.4 | 4.70 | - |
| 60 | 22.92 | 35.14 | 384.0 | 4.98 | - |
| 131 | 21.31 | 35.19 | 337.6 | 4.86 | - |
| 222 | 18.94 | 34.99 | 292.4 | 4.37 | - |
| 334 | 12.18 | 34.16 | 208.9 | 4.23 | - |
| 441 | 8.86 | 34.07 | 160.5 | 3.52 | - |
| 551 | 6.76 | 34.04 | 133.4 | 2.52 | - |
| 659 | 5.60 | 34.13 | 112.7 | 1.20 | - |
| 880 | 4.56 | 34.40 | 81.0 | 0.78 | - |
| 1094 | 3.92 | 34.51 | 66.3 | 1.11 | - |
| 1304 | 3.42 | 34.56 | 58.0 | 1.32 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 4 Δ D' O/ 1000 = 1.768
LAT. 24° 17' N LONG. 155° 11' W
DATE (GMT) 7/3/57 TIME (GMT) 1852
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

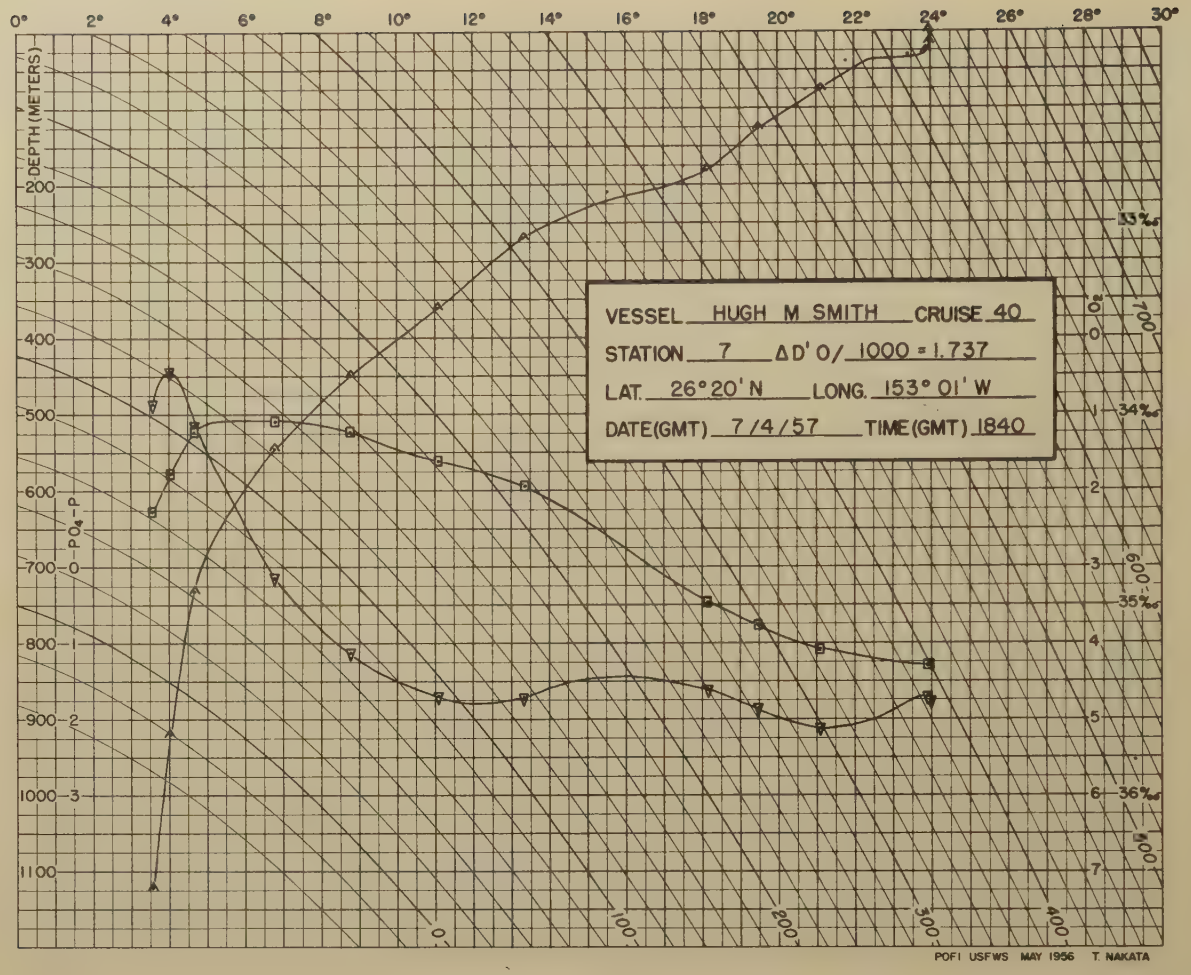
Weather: 02, cloud coverage 2. Wind: 060°, 17 kt. Sea: 1-3 ft. Wire angle: 17°.
BT slide: 10. Dry bulb: 77.2°F. Wet bulb: 72.8°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 24.88 | 35.30 | 427.8 | 4.63 | - |
| 20 | 24.86 | 35.30 | 427.2 | 4.61 | - |
| 51 | 22.64 | 35.17 | 374.3 | 5.01 | - |
| 72 | 21.61 | 35.17 | 346.9 | 5.05 | - |
| 154 | 19.26 | 35.01 | 298.6 | 4.33 | - |
| 257 | 14.70 | 34.47 | 235.1 | 4.38 | - |
| 339 | 11.67 | 34.22 | 195.4 | 4.46 | - |
| 458 | 8.37 | 34.07 | 153.2 | 3.61 | - |
| 572 | 6.54 | 34.09 | 127.0 | 1.89 | - |
| 685 | 5.36 | 34.18 | 106.2 | 0.96 | - |
| 907 | 4.24 | 34.40 | 77.7 | 0.80 | - |
| 1128 | 3.70 | 34.51 | 64.2 | 1.14 | - |
| 1339 | 3.24 | 34.54 | 57.8 | 1.33 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 6 ΔD' O/ 1000 = 1.725
LAT. 25° 15' N LONG. 154° 06' W
DATE (GMT) 7/4/57 TIME (GMT) 0705
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

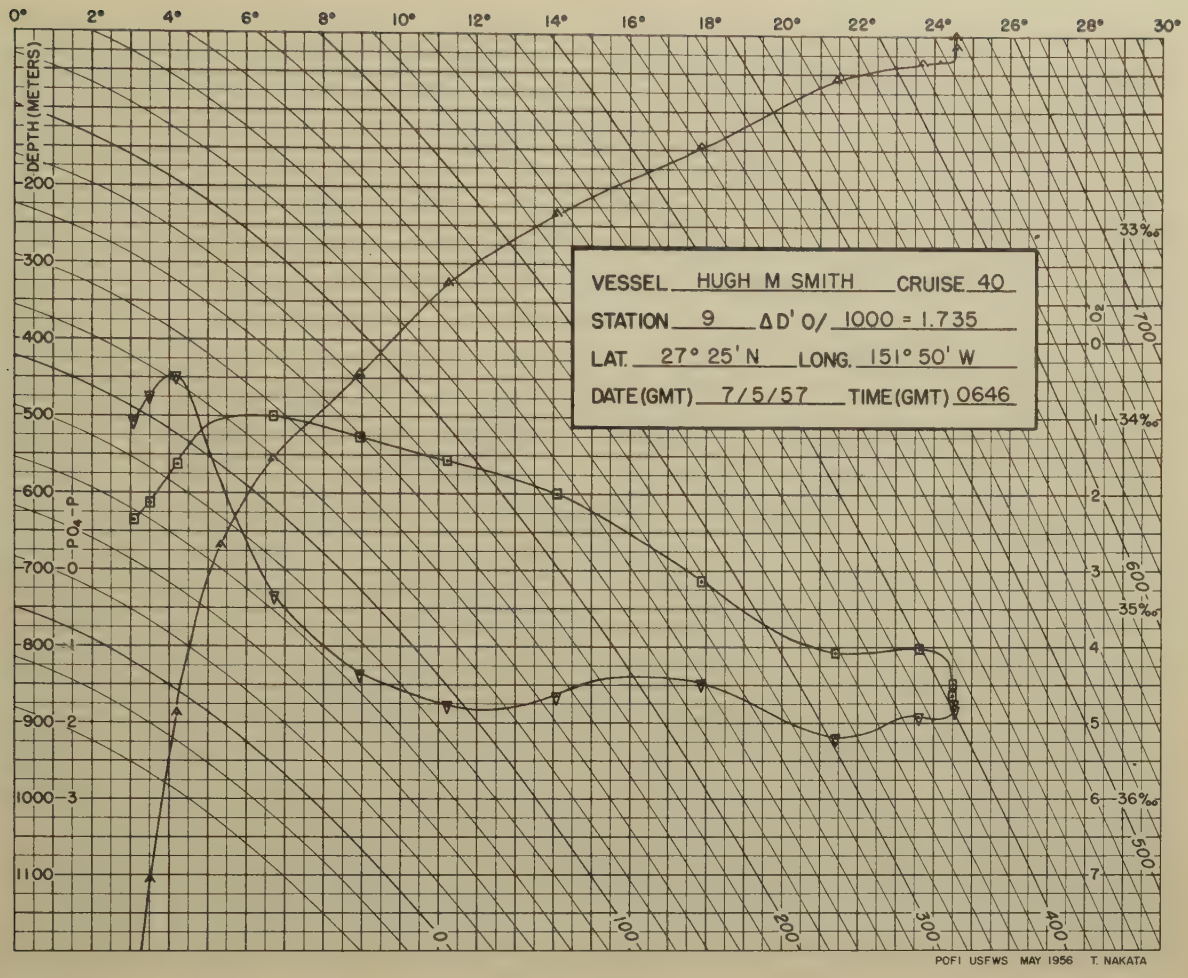
Weather: 02, cloud coverage 2. Wind: 080°, 16 kt. Sea: 1-3 ft. Wire angle: 06°.
BT slide: 14. Dry bulb: 76.6°F. Wet bulb: 71.3°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 24.50 | 35.35 | 413.3 | 4.67 | - |
| 15 | 24.52 | 35.37 | 412.5 | 4.65 | - |
| 42 | 21.96 | 35.25 | 350.3 | 5.13 | - |
| 63 | 20.98 | 35.21 | 327.5 | 5.15 | - |
| 159 | 18.31 | 34.96 | 279.3 | 4.77 | - |
| 255 | 13.85 | 34.40 | 223.2 | 4.53 | - |
| 351 | 11.28 | 34.22 | 188.7 | 4.78 | - |
| 476 | 7.98 | 34.02 | 151.2 | 3.82 | - |
| 596 | 5.96 | 34.00 | 126.5 | 2.34 | - |
| 715 | 4.72 | 34.14 | 102.2 | 1.03 | - |
| 944 | 3.91 | 34.36 | 77.5 | 0.61 | - |
| 1169 | 3.39 | 34.51 | 61.4 | 1.01 | - |
| 1380 | 3.02 | 34.60 | 51.3 | 1.34 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 7 ΔD' O/ 1000 = 1.737
LAT. 26°20' N LONG. 153° 01' W
DATE(GMT) 7/4/57 TIME(GMT) 1840
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

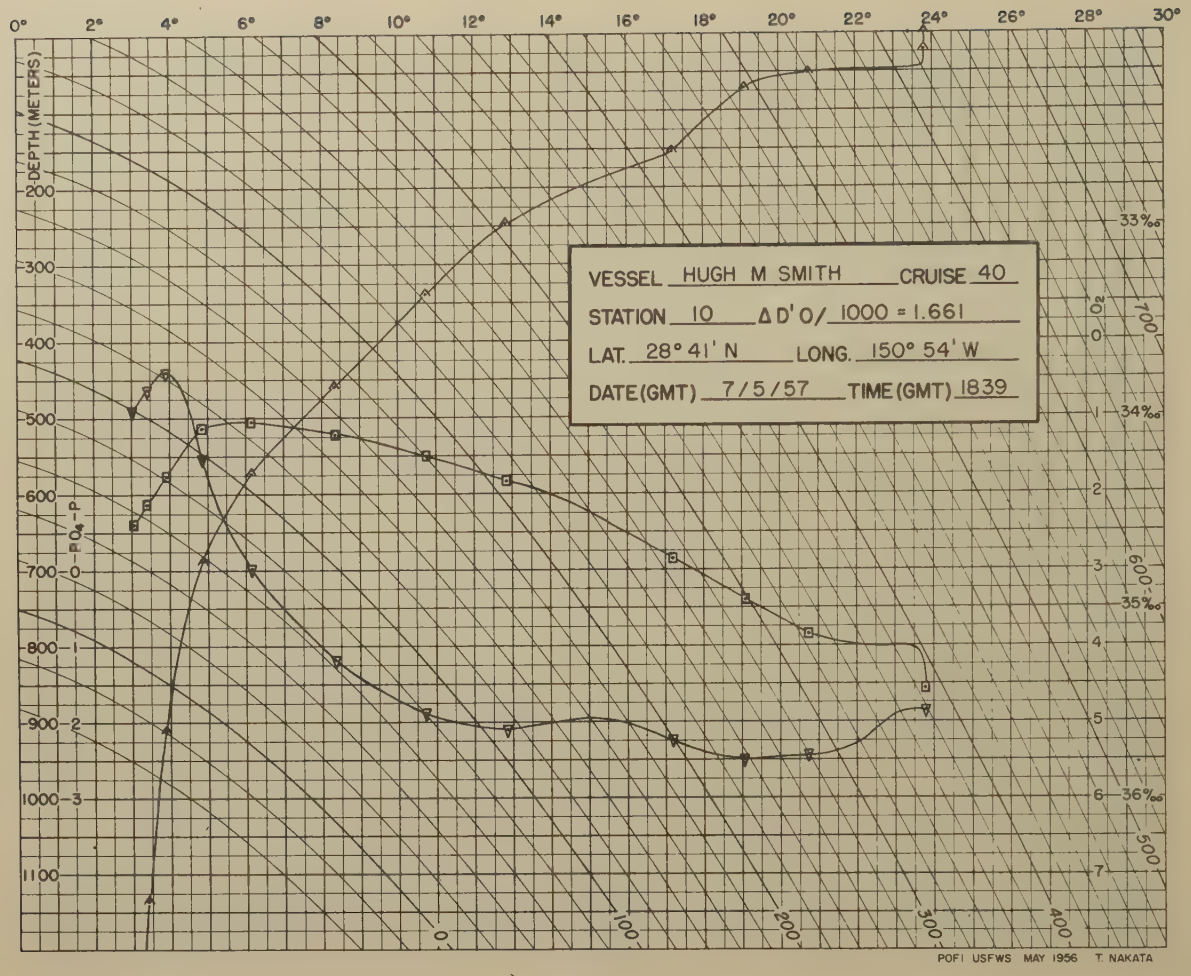
Weather: 02, cloud coverage 2. Wind: 070°, 11 kt. Sea: 1-3 ft. Wire angle: 27°.
BT slide: 17. Dry bulb: 75.3°F. Wet bulb: 70.8°F. Barometric pressure: 1023 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 23.96 | 35.32 | 400.1 | 4.76 | - |
| 13 | 23.96 | 35.32 | 400.1 | 4.73 | - |
| 26 | 23.87 | 35.32 | 397.4 | 4.70 | - |
| 75 | 21.09 | 35.23 | 328.9 | 5.12 | - |
| 128 | 19.47 | 35.10 | 297.2 | 4.86 | - |
| 181 | 18.15 | 34.99 | 273.3 | 4.60 | - |
| 269 | 13.35 | 34.38 | 214.8 | 4.72 | - |
| 362 | 11.09 | 34.25 | 183.0 | 4.70 | - |
| 450 | 8.80 | 34.09 | 158.1 | 4.13 | - |
| 545 | 6.81 | 34.04 | 134.1 | 3.14 | - |
| 732 | 4.68 | 34.09 | 105.5 | 1.15 | - |
| 920 | 4.04 | 34.31 | 82.5 | 0.44 | - |
| 1122 | 3.60 | 34.51 | 63.3 | 0.86 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 9 ΔD' O/ 1000 = 1.735
LAT. 27° 25' N LONG. 151° 50' W
DATE (GMT) 7/5/57 TIME (GMT) 0646
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

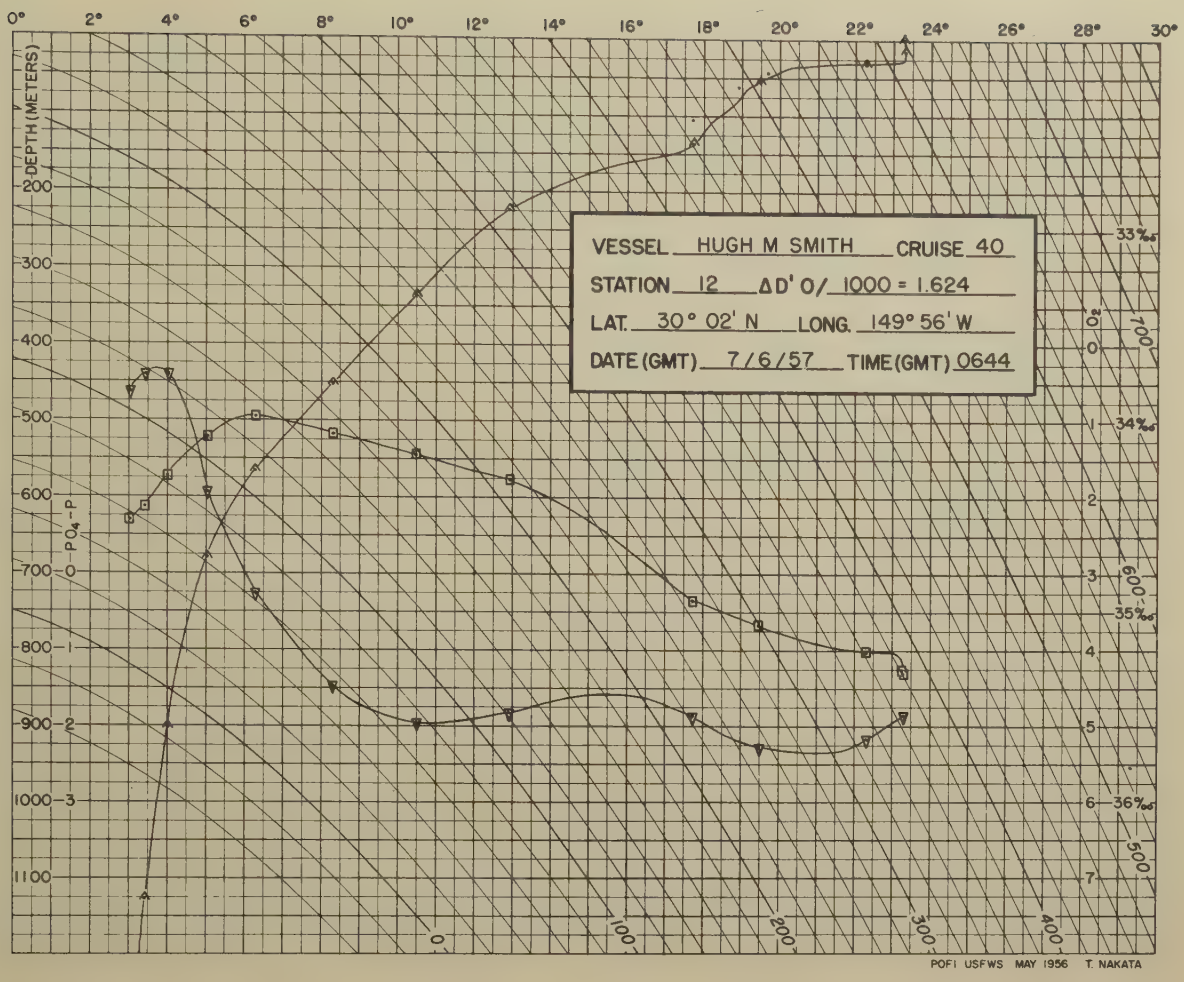
Weather: 03, cloud coverage 6. Wind: 090°, 15 kt. Sea: 1-3 ft. Wire angle: 19°.
BT slide: 22. Dry bulb: 75.3°F. Wet bulb: 70.2°F. Barometric pressure: 1025 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 24.54 | 35.46 | 406.6 | 4.75 | - |
| 14 | 24.55 | 35.39 | 411.9 | 4.80 | - |
| 34 | 23.62 | 35.21 | 398.3 | 4.92 | - |
| 58 | 21.40 | 35.23 | 337.0 | 5.18 | - |
| 146 | 17.88 | 34.85 | 277.1 | 4.46 | - |
| 236 | 14.08 | 34.40 | 227.7 | 4.65 | - |
| 327 | 11.23 | 34.23 | 186.9 | 4.76 | - |
| 444 | 8.96 | 34.11 | 159.1 | 4.36 | - |
| 557 | 6.68 | 34.00 | 135.3 | 3.33 | - |
| 669 | 5.32 | NS | - | NS | - |
| 888 | 4.18 | 34.25 | 88.3 | 0.49 | - |
| 1108 | 3.53 | 34.45 | 67.2 | 0.73 | - |
| 1316 | 3.08 | 34.54 | 56.3 | 1.07 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 10 Δ D' O/ 1000 = 1.661
LAT. 28° 41' N LONG. 150° 54' W
DATE (GMT) 7/5/57 TIME (GMT) 1839
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

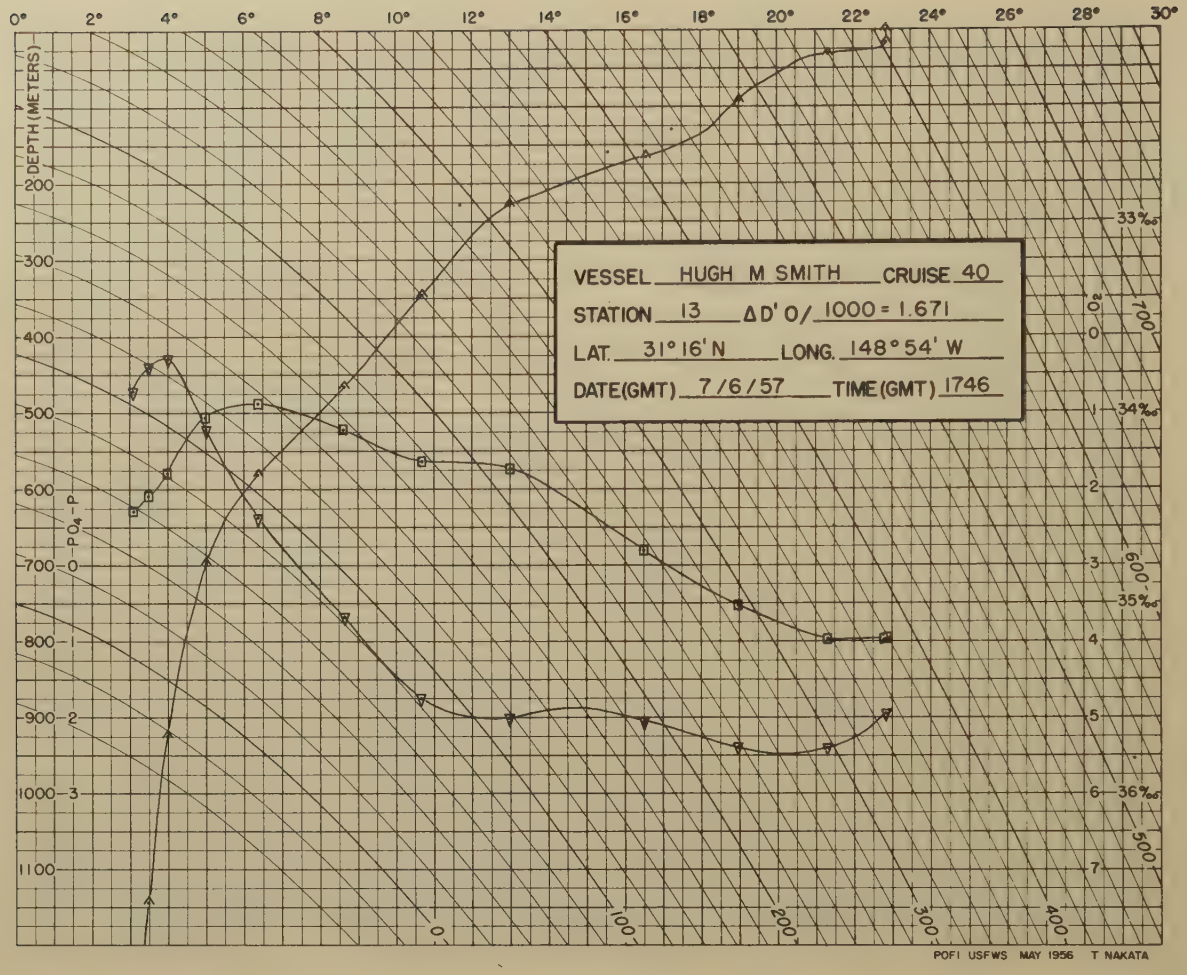
Weather: 02, cloud coverage 8. Wind: 070°, 18 kt. Sea: 3-5 ft. Wire angle: 19°.
BT slide: 26. Dry bulb: 73.8°F. Wet bulb: 69.6°F. Barometric pressure: 1026 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 23.78 | 35.43 | 387.0 | 4.86 | - |
| 20 | 23.78 | 35.43 | 387.0 | 4.85 | - |
| 51 | 20.74 | 35.14 | 326.5 | 5.44 | - |
| 71 | 19.08 | 34.96 | 298.1 | 5.49 | - |
| 153 | 17.20 | 34.74 | 269.5 | 5.26 | - |
| 247 | 12.85 | 34.33 | 208.9 | 5.10 | - |
| 339 | 10.75 | 34.20 | 181.0 | 4.88 | - |
| 459 | 8.37 | 34.09 | 151.7 | 4.19 | - |
| 574 | 6.18 | 34.02 | 127.6 | 2.98 | - |
| 688 | 4.86 | 34.05 | 110.4 | 1.54 | - |
| 913 | 3.89 | 34.31 | 80.9 | 0.40 | - |
| 1137 | 3.41 | 34.45 | 66.2 | 0.63 | - |
| 1353 | 3.04 | 34.56 | 54.5 | 0.91 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 12 ΔD' O/ 1000 = 1.624
LAT. 30° 02' N LONG. 149° 56' W
DATE (GMT) 7/6/57 TIME (GMT) 0644
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

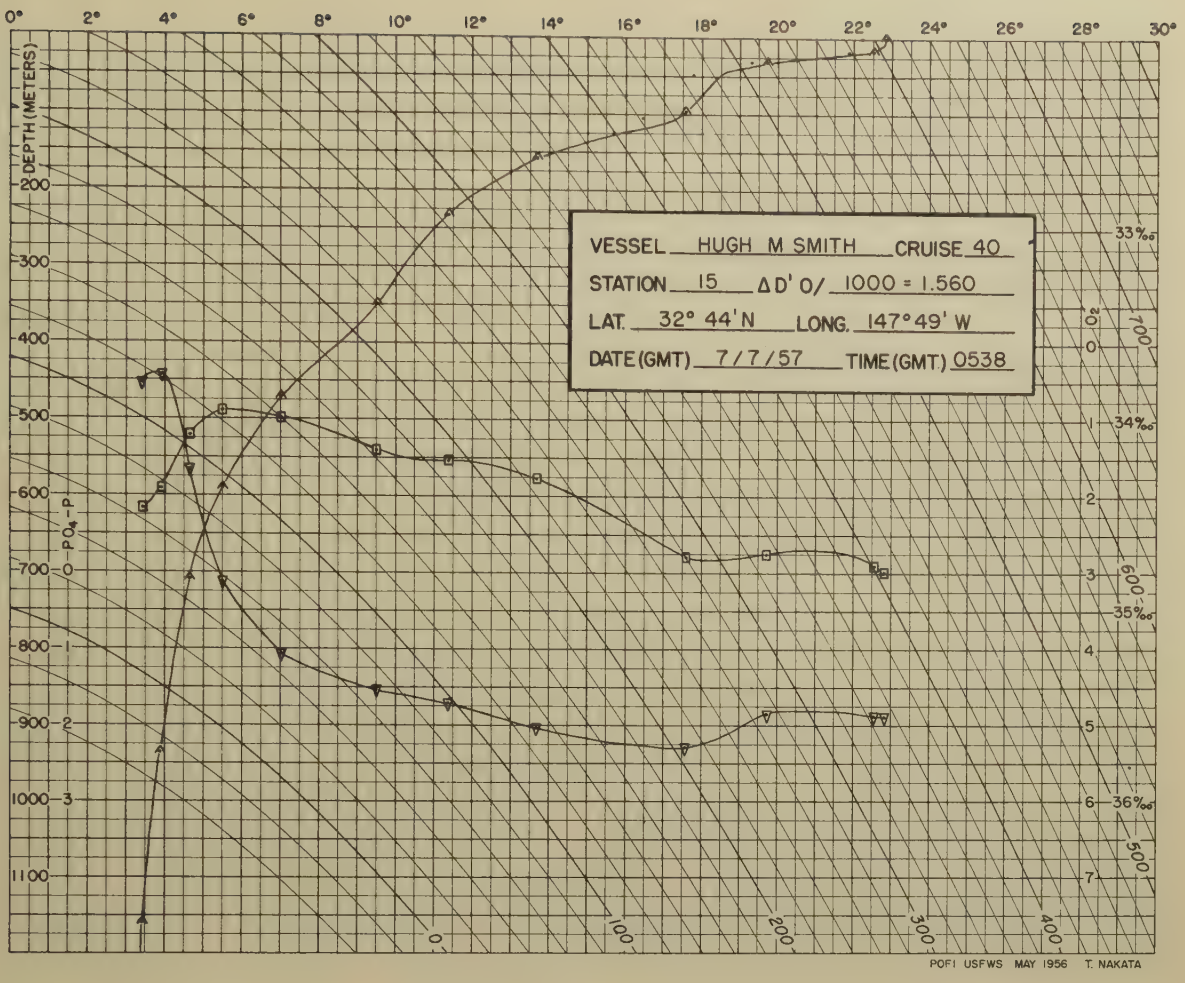
Weather: 50, cloud coverage 8. Wind: 070°, 14 kt. Sea: 1-3 ft. Wire angle: 17°.
BT slide: 30. Dry bulb: 71.8°F. Wet bulb: 66.8°F. Barometric pressure: 1026 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 23.27 | 35.32 | 380.8 | 4.86 | - |
| 15 | 23.30 | 35.30 | 382.9 | 4.88 | - |
| 30 | 22.30 | 35.21 | 362.1 | 5.17 | - |
| 54 | 19.49 | 35.07 | 299.9 | 5.29 | - |
| 136 | 17.74 | 34.94 | 267.5 | 4.86 | - |
| 222 | 12.92 | 34.31 | 211.6 | 4.82 | - |
| 335 | 10.46 | 34.18 | 177.5 | 4.95 | - |
| 452 | 8.31 | 34.07 | 152.5 | 4.45 | - |
| 566 | 6.32 | 33.98 | 132.7 | 3.24 | - |
| 679 | 5.04 | 34.09 | 109.3 | 1.94 | - |
| 903 | 4.00 | 34.29 | 83.6 | 0.41 | - |
| 1127 | 3.42 | 34.45 | 66.3 | 0.41 | - |
| 1342 | 3.05 | 34.52 | 57.5 | 0.63 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 13 ΔD' O/ 1000 = 1.671
LAT. 31° 16' N LONG. 148° 54' W
DATE(GMT) 7/6/57 TIME(GMT) 1746
DEPTH (METERS)
PO4 - P
POFI USFWS MAY 1956 T NAKATA

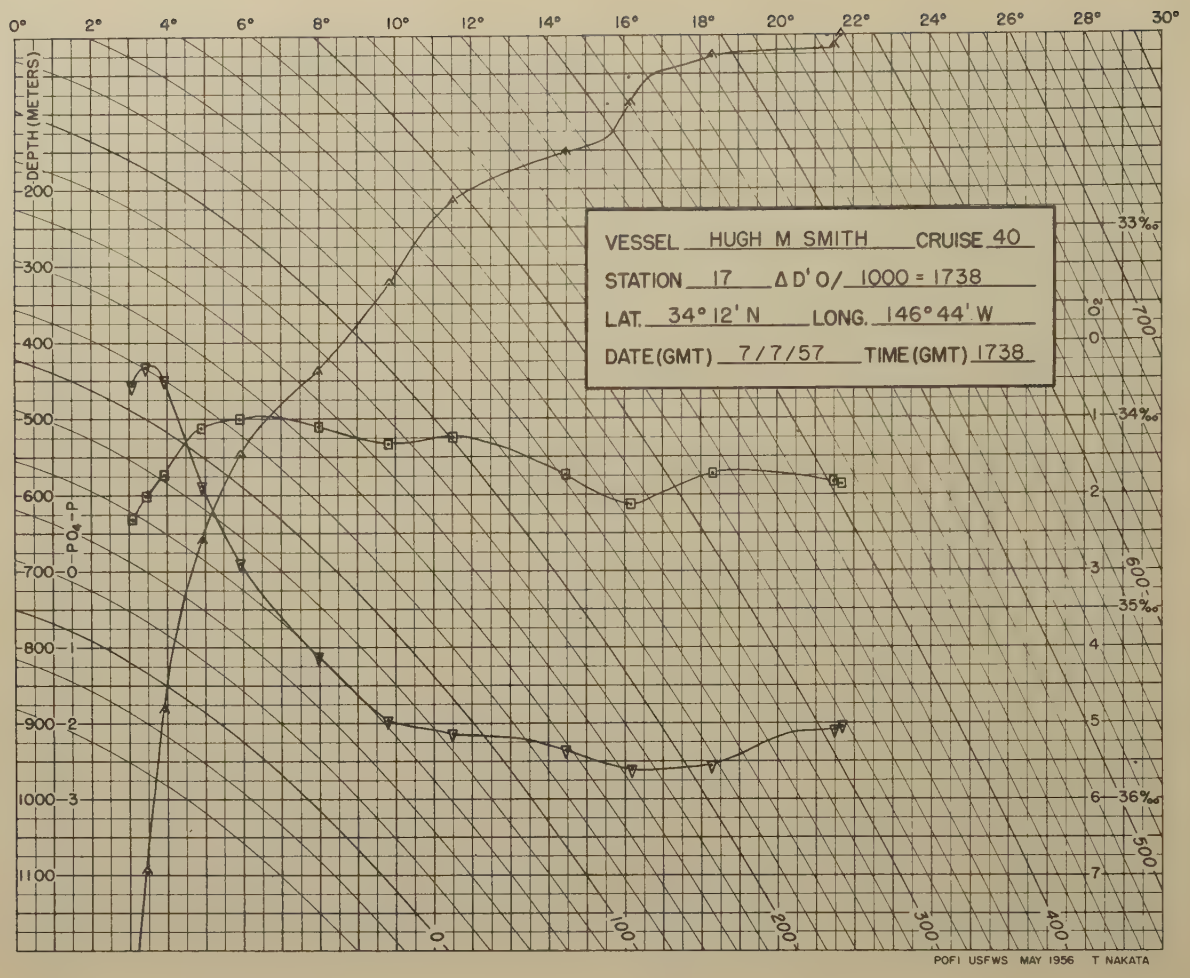
Weather: 02, cloud coverage 8. Wind: 010°, 10 kt. Sea: 1-3 ft. Wire angle: 13°.
BT slide: 33. Dry bulb: 72.5°F. Wet bulb: 65.3°F. Barometric pressure: 1026 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.82 | 35.19 | 377.6 | 4.94 | - |
| 15 | 22.83 | 35.19 | 377.8 | 4.93 | - |
| 30 | 21.31 | 35.19 | 337.5 | 5.39 | - |
| 92 | 18.96 | 35.01 | 291.4 | 5.40 | - |
| 164 | 16.54 | 34.72 | 256.1 | 5.04 | - |
| 227 | 12.98 | 34.29 | 214.1 | 5.02 | - |
| 344 | 10.66 | 34.25 | 175.7 | 4.74 | - |
| 465 | 8.65 | 34.09 | 155.9 | 3.66 | - |
| 581 | 6.38 | 33.95 | 135.5 | 2.36 | - |
| 697 | 5.00 | 34.02 | 114.1 | 1.20 | - |
| 923 | 4.00 | 34.31 | 82.1 | 0.30 | - |
| 1144 | 3.48 | 34.43 | 68.2 | 0.40 | - |
| 1356 | 3.08 | 34.52 | 57.9 | 0.70 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 15 ΔD' O/ 1000 = 1.560
LAT. 32° 44' N LONG. 147° 49' W
DATE (GMT) 7/7/57 TIME (GMT) 0538
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

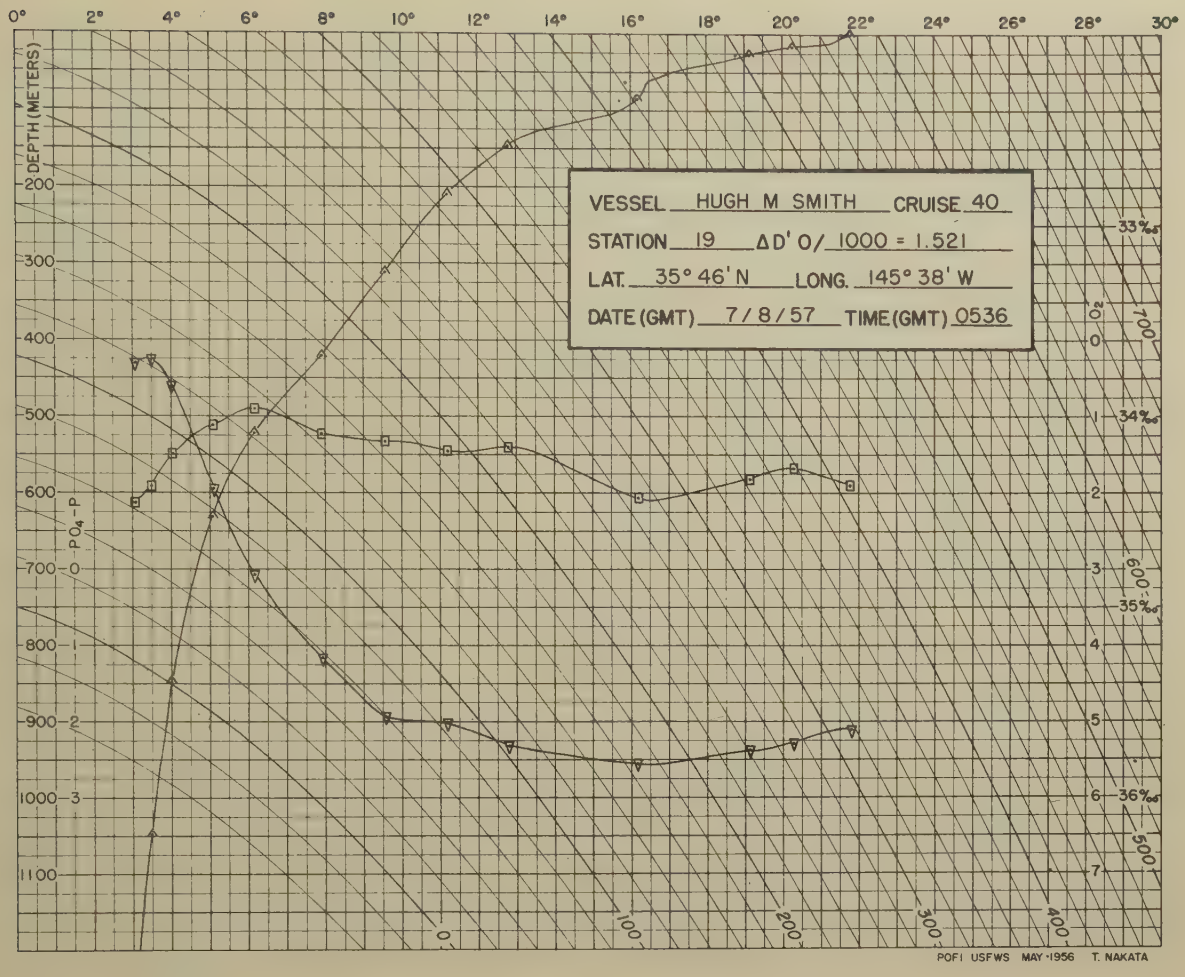
Weather: 02, cloud coverage 2. Wind: 080°, 07 kt. Sea: 1-3 ft. Wire angle: 09°.
BT slide: 38. Dry bulb: 72.7°F. Wet bulb: 68.3°F. Barometric pressure: 1026 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.82 | 34.79 | 406.6 | 4.90 | - |
| 16 | 22.56 | 34.76 | 401.7 | 4.87 | - |
| 31 | 19.73 | 34.70 | 332.6 | 4.85 | - |
| 95 | 17.58 | 34.72 | 279.6 | 5.29 | - |
| 159 | 13.68 | 34.31 | 226.3 | 5.03 | - |
| 233 | 11.38 | 34.22 | 190.4 | 4.71 | - |
| 351 | 9.53 | 34.16 | 164.2 | 4.53 | - |
| 473 | 7.02 | 34.00 | 139.5 | 4.05 | - |
| 591 | 5.48 | 33.96 | 124.1 | 3.11 | - |
| 708 | 4.64 | 34.09 | 105.3 | 1.66 | - |
| 935 | 3.92 | 34.36 | 77.7 | 0.42 | - |
| 1159 | 3.42 | 34.47 | 64.8 | 0.52 | - |
| (1368) | NS | 34.52 | - | 0.93 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 17 Δ D' O/ 1000 = 1738
LAT. 34° 12' N LONG. 146° 44' W
DATE (GMT) 7/7/57 TIME (GMT) 1738
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 1. Wind: 020°, 08 kt. Sea: < 1 ft. Wire angle: 06°.
BT slide: 41. Dry bulb: 70.0°F. Wet bulb: 65.8°F. Barometric pressure: 1025 mb.

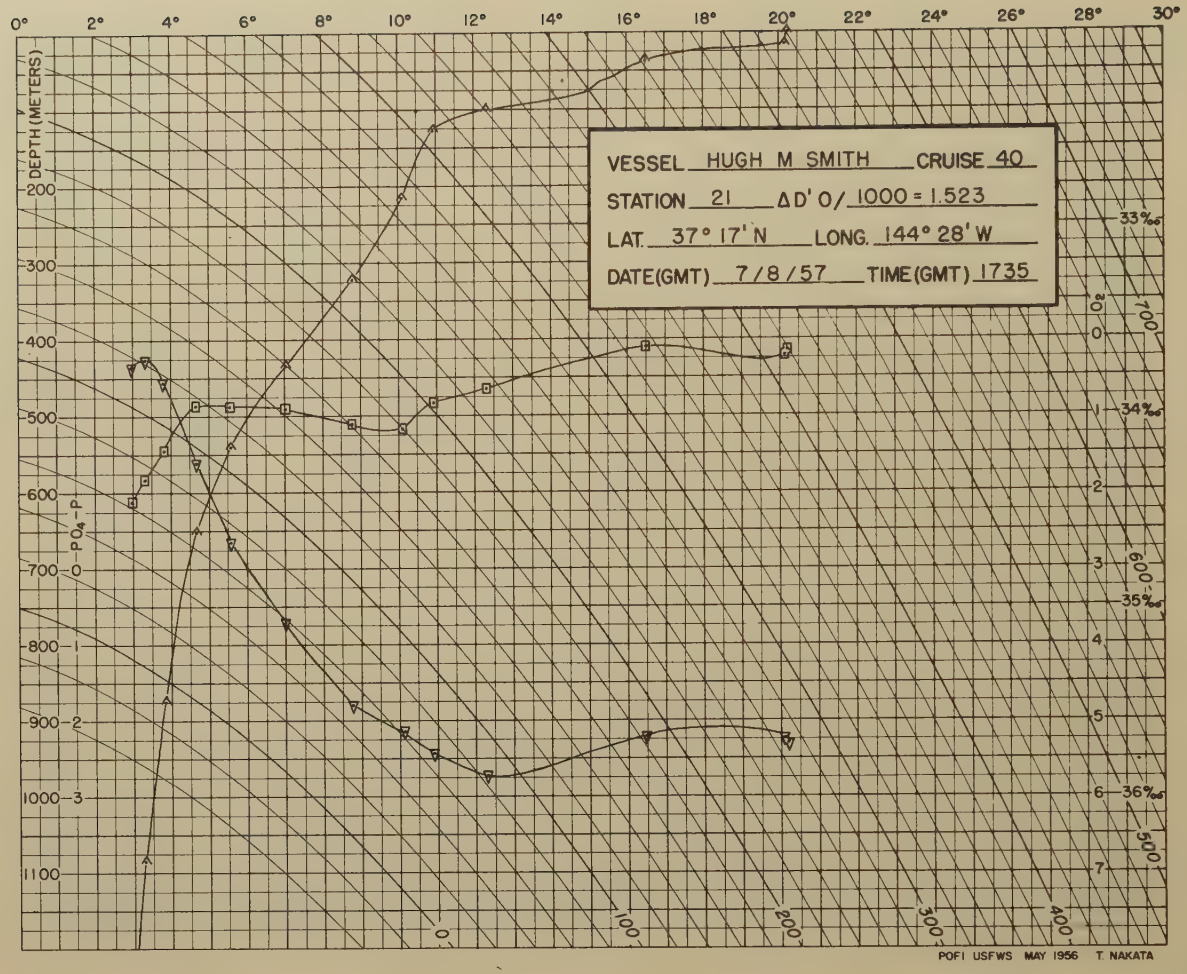
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 21.66 | 34.34 | 408.0 | 5.05 | - |
| 15 | 21.45 | 34.33 | 403.3 | 5.08 | - |
| 26 | 18.28 | 34.29 | 327.2 | 5.54 | - |
| 89 | 16.15 | 34.45 | 267.1 | 5.60 | - |
| 152 | 14.46 | 34.29 | 243.3 | 5.34 | - |
| 215 | 11.51 | 34.09 | 202.2 | 5.12 | - |
| 323 | 9.82 | 34.13 | 170.9 | 4.95 | - |
| 438 | 7.96 | 34.04 | 149.5 | 4.11 | - |
| 546 | 5.91 | 34.00 | 126.1 | 2.87 | - |
| 659 | 4.90 | 34.04 | 111.6 | 1.85 | - |
| 881 | 3.92 | 34.29 | 82.9 | 0.49 | - |
| 1094 | 3.42 | 34.40 | 70.0 | 0.31 | - |
| 1309 | 3.06 | 34.52 | 57.7 | 0.54 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 19 ΔD' O/ 1000 = 1.521
LAT. 35° 46' N LONG. 145° 38' W
DATE (GMT) 7/8/57 TIME (GMT) 0536
DEPTH (METERS)
PO4-P
POFI USFWS MAY-1956 T. NAKATA

Weather: 03, cloud coverage 2. Wind: 250°, 09 kt. Sea: < 1 ft. Wire angle: 14°.
BT slide: 46. Dry bulb: 71.3°F. Wet bulb: 66.8°F. Barometric pressure: 1025 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 21.78 | 34.36 | 409.8 | 5.11 | 0.40 |
| 15 | 20.26 | 34.27 | 377.1 | 5.29 | 0.47 |
| 26 | 19.12 | 34.33 | 344.5 | 5.37 | 0.15 |
| 85 | 16.16 | 34.43 | 268.9 | 5.55 | 0.26 |
| 146 | 12.80 | 34.16 | 220.4 | 5.32 | 0.63 |
| 209 | 11.20 | 34.18 | 190.2 | 5.02 | 0.82 |
| 311 | 9.58 | 34.13 | 167.2 | 4.93 | 1.17 |
| 420 | 7.92 | 34.09 | 145.3 | 4.17 | 1.48 |
| 522 | 6.19 | 33.96 | 132.2 | 3.06 | 0.98 |
| 632 | 5.10 | 34.05 | 113.0 | 1.94 | 2.58 |
| 846 | 4.04 | 34.20 | 90.8 | 0.59 | 3.25 |
| 1048 | 3.47 | 34.36 | 73.4 | 0.26 | 3.41 |
| 1260 | 3.11 | 34.45 | 63.5 | 0.31 | 1.67* |
| 1260 | | | | | 1.42* |

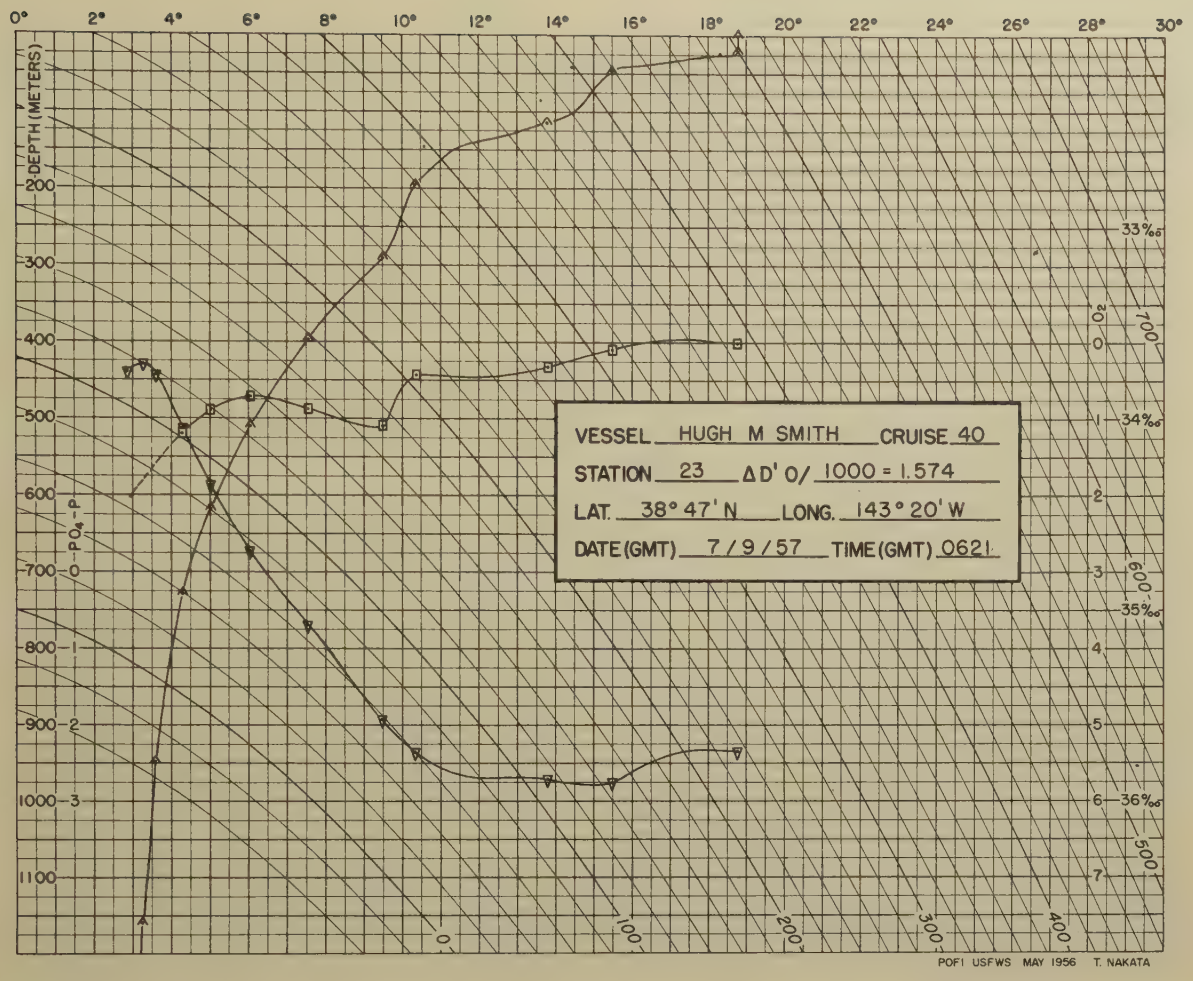
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 21 ΔD' O/ 1000 = 1.523
LAT. 37° 17' N LONG. 144° 28' W
DATE(GMT) 7/8/57 TIME(GMT) 1735
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 1. Wind: 270°, 10 kt. Sea: 1-3 ft. Wire angle: 09°.
BT slide: 49. Dry bulb: 68.7°F. Wet bulb: 66.6°F. Barometric pressure: 1023 mb.

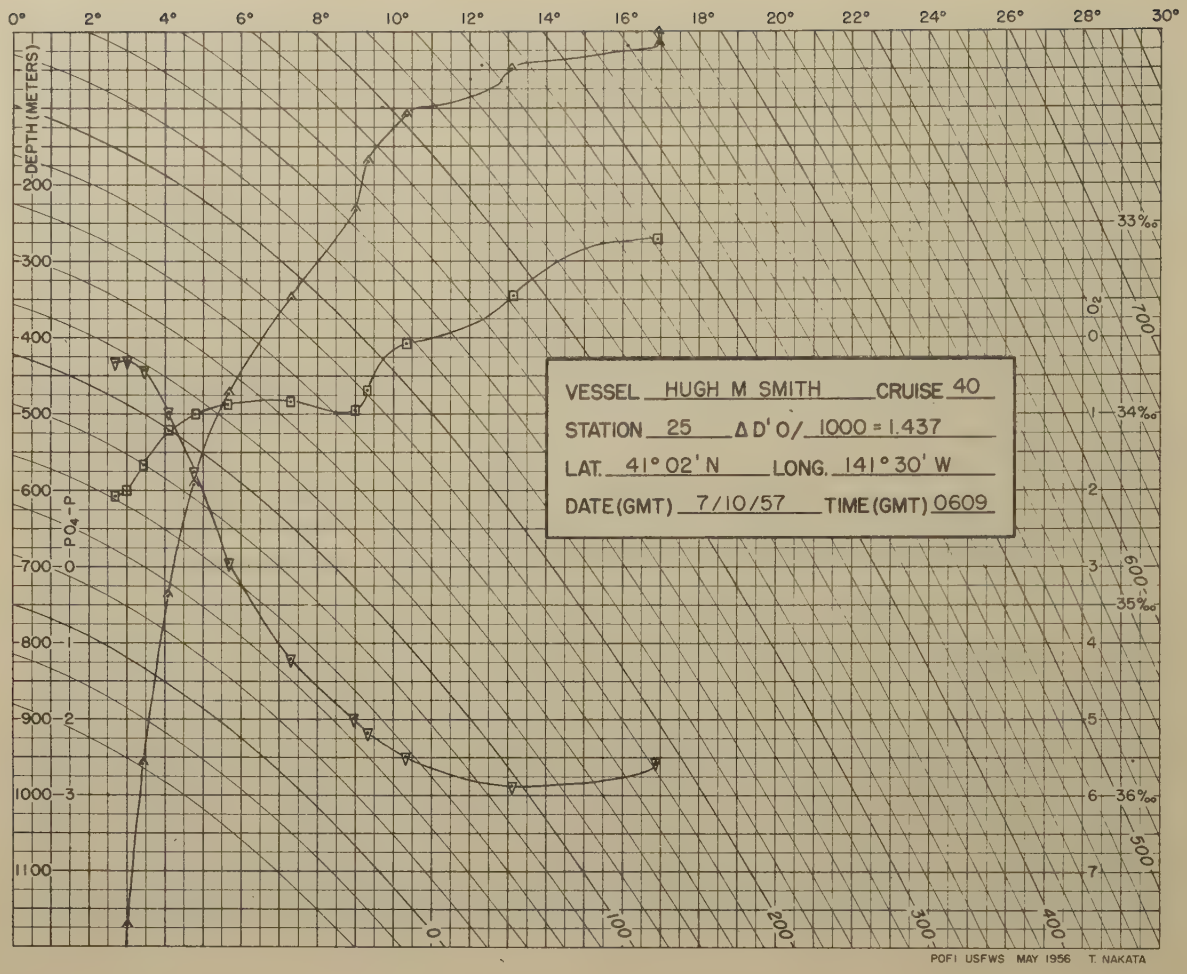
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 20.18 | 33.66 | 419.3 | 5.29 | 0.20 |
| 16 | 20.12 | 33.68 | 416.2 | 5.24 | 0.31 |
| 37 | 16.46 | 33.64 | 333.0 | 5.22 | 0.02 |
| 100 | 12.32 | 33.86 | 233.4 | 5.72 | 0.47 |
| 126 | 10.92 | 33.93 | 204.5 | 5.43 | 0.75 |
| 215 | 10.08 | 34.07 | 179.5 | 5.15 | 0.90 |
| 322 | 8.79 | 34.04 | 161.6 | 4.79 | 0.61 |
| 434 | 7.02 | 33.96 | 143.1 | 3.70 | 0.80 |
| 542 | 5.58 | 33.95 | 126.0 | 2.65 | 0.70 |
| 653 | 4.67 | 33.95 | 116.0 | 1.62 | 0.93 |
| 874 | 3.83 | 34.18 | 90.3 | 0.56 | 3.16 |
| 1084 | 3.34 | 34.33 | 74.6 | 0.27 | 2.56 |
| 1295 | 2.98 | 34.45 | 62.0 | 0.37 | 0.98 * |
| 1295 | | | | | 0.92 * |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 23 ΔD' O/ 1000 = 1.574
LAT. 38° 47' N LONG. 143° 20' W
DATE(GMT) 7/9/57 TIME(GMT) 0621
DEPTH (METERS)
POF1 USFWS MAY 1956 T. NAKATA

Weather: 03, cloud coverage 8. Wind: 240°, 20 kt. Sea: 3-5 ft. Wire angle: 11°.
BT slide: 53A. Dry bulb: 67.8°F. Wet bulb: 66.3°F. Barometric pressure: 1019 mb.

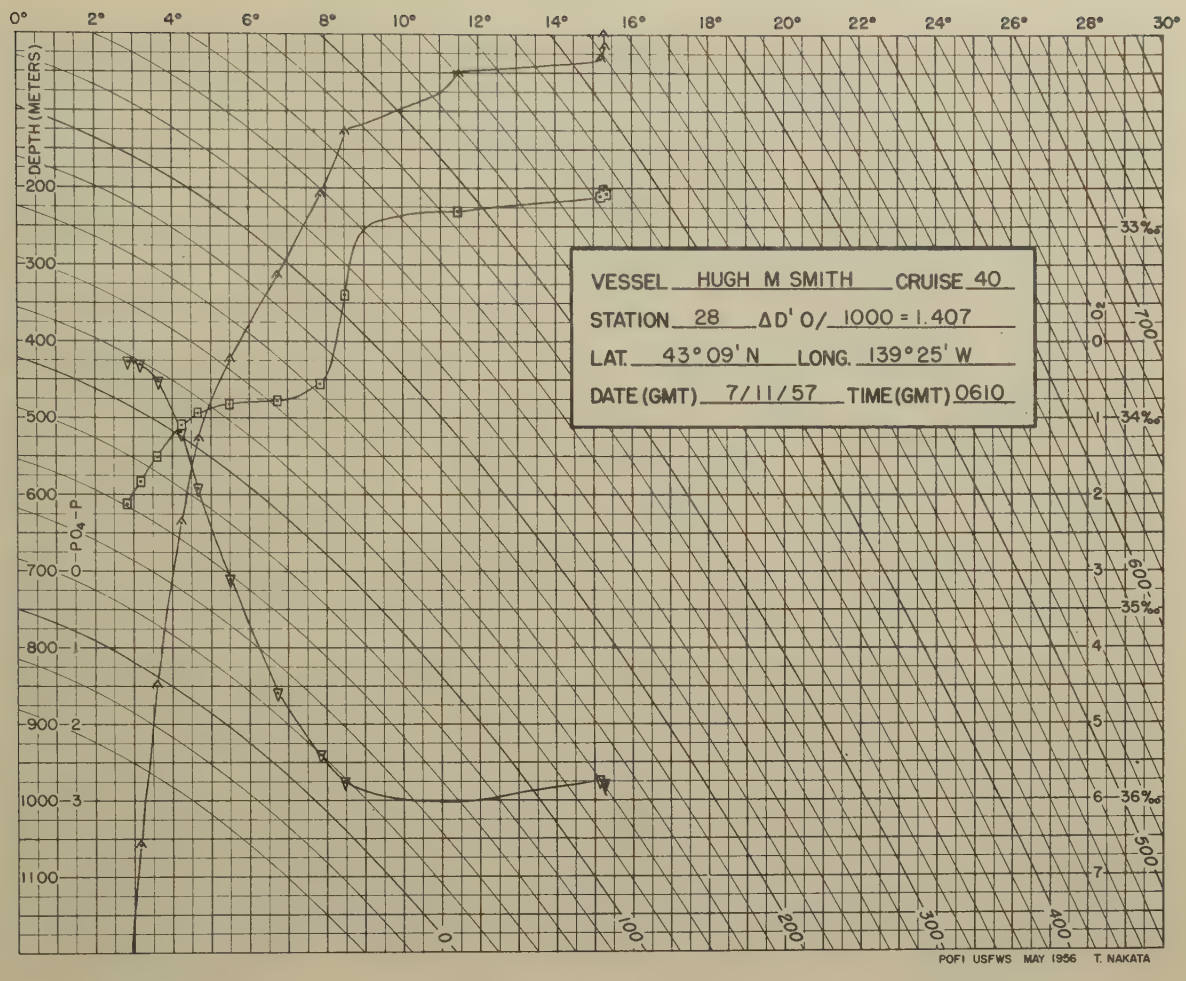
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 18.78 | 33.60 | 389.2 | 5.34 | 0.37 |
| 20 | 18.78 | 33.60 | 389.2 | 5.34 | 0.42 |
| 45 | 15.47 | 33.64 | 311.5 | 5.78 | 0.41 |
| 113 | 13.79 | 33.73 | 270.9 | 5.72 | NS |
| 196 | 10.36 | 33.77 | 206.1 | 5.35 | 0.76 |
| 291 | 9.48 | 34.04 | 172.3 | 4.93 | NS |
| 397 | 7.58 | 33.95 | 151.1 | 3.70 | NS |
| 510 | 6.04 | 33.89 | 135.9 | 2.74 | 0.40 |
| 617 | 5.02 | 33.96 | 119.0 | 1.88 | NS |
| 729 | 4.32 | 34.08 | 102.7 | 1.12 | 1.38 |
| 949 | 3.60 | 34.24 | 83.7 | 0.44 | 2.30 |
| 1160 | 3.25 | 34.42 | 66.9 | 0.29 | NS |
| 1370 | 2.90 | 34.46 | 60.8 | 0.42 | 1.81 |


VESSEL HUGH M SMITH CRUISE 40
STATION 25 Δ D' O/ 1000 = 1.437
LAT. 41° 02' N LONG. 141° 30' W
DATE (GMT) 7/10/57 TIME (GMT) 0609
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 01, cloud coverage 7. Wind: 020°, 21 kt. Sea: 5-8 ft. Wire angle: 05°.
BT slide: 62. Dry bulb: 62.3°F. Wet bulb: 60.0°F. Barometric pressure: 1020 mb.

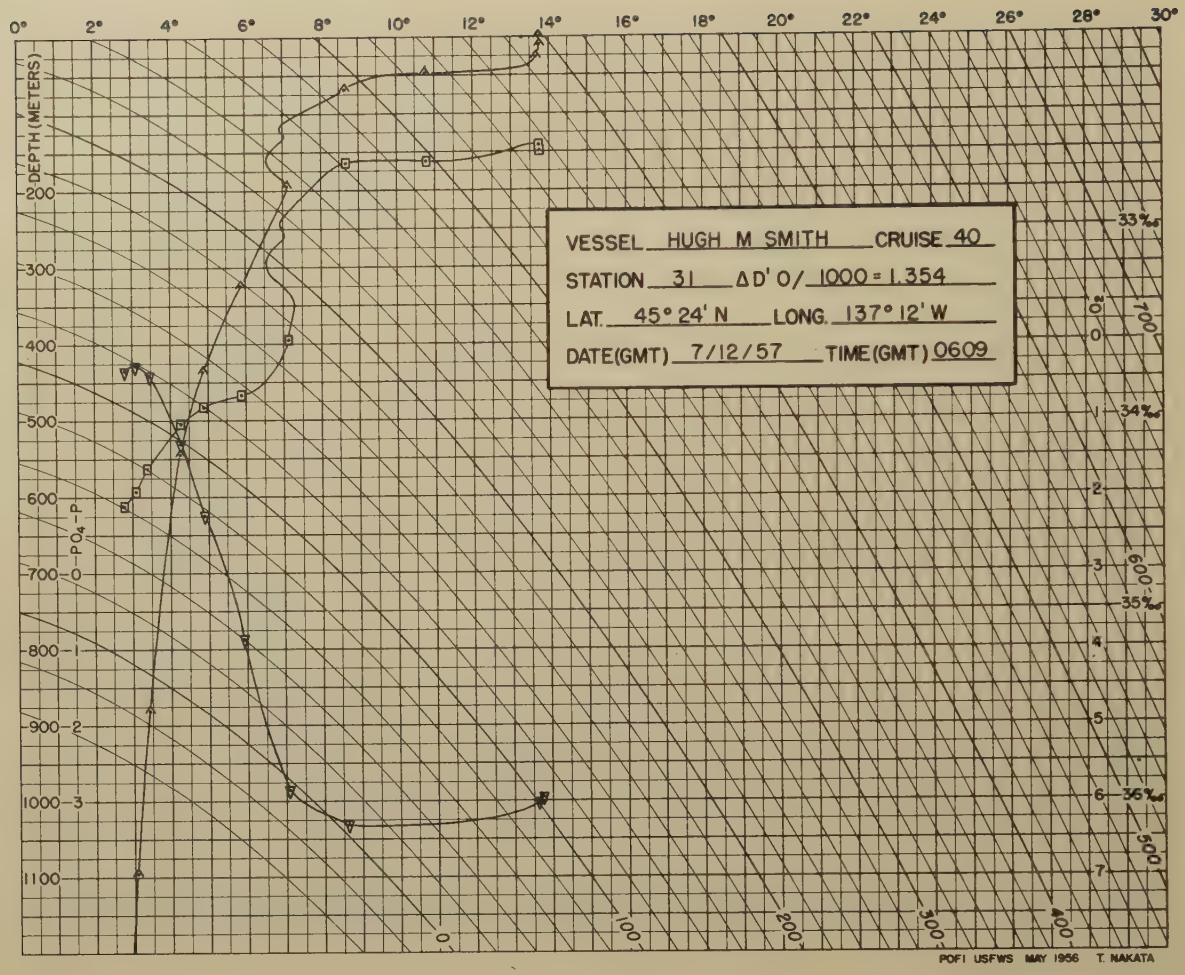
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 16.92 | 33.08 | 384.0 | 5.55 | 0.36 |
| 16 | 16.93 | 33.08 | 384.1 | 5.60 | 0.40 |
| 47 | 13.11 | 33.38 | 283.3 | 5.87 | 0.26 |
| 109 | 10.34 | 33.63 | 216.3 | 5.50 | 0.79 |
| 168 | 9.34 | 33.87 | 182.9 | 5.18 | 0.72 |
| 231 | 8.99 | 33.98 | 169.0 | 4.98 | 0.89 |
| 348 | 7.30 | 33.93 | 149.0 | 4.20 | 0.80 |
| 473 | 5.68 | 33.95 | 127.0 | 2.95 | 0.89 |
| 593 | 4.75 | 34.00 | 113.0 | 1.75 | 1.37 |
| 738 | 4.08 | 34.09 | 99.4 | 0.97 | 2.67 |
| 959 | 3.44 | 34.27 | 80.0 | 0.43 | 2.91 |
| 1171 | 3.00 | 34.40 | 66.1 | 0.30 | 2.92 |
| 1386 | 2.70 | 34.43 | 61.5 | 0.32 | 1.79* |
| 1386 | | | | | 1.60* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 28 ΔD' O/ 1000 = 1.407
LAT. 43° 09' N LONG. 139° 25' W
DATE (GMT) 7/11/57 TIME (GMT) 0610
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 03, cloud coverage 8. Wind: 280°, 10 kt. Sea: 1-3 ft. Wire angle: 14°.
BT slide: 73. Dry bulb: 57.5°F. Wet bulb: 53.6°F. Barometric pressure: 1023 mb.

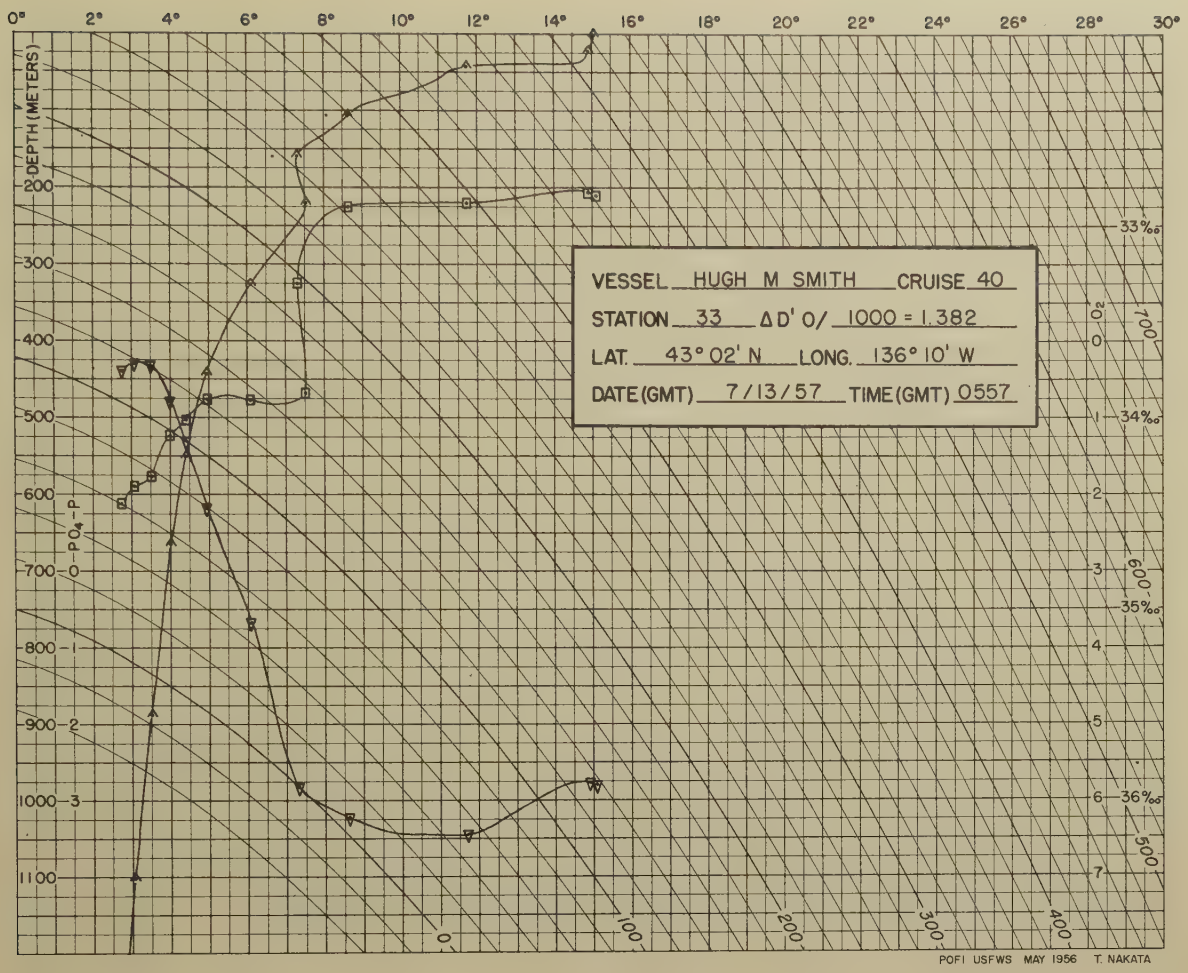
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.27 | 32.81 | 368.3 | 5.81 | 0.41 |
| 15 | 15.30 | 32.83 | 367.5 | 5.79 | 0.38 |
| 30 | 15.18 | 32.84 | 364.0 | 5.76 | 0.38 |
| 51 | 11.45 | 32.92 | 287.1 | NG | 0.54 |
| 128 | 8.49 | 33.36 | 207.8 | 5.75 | 1.31 |
| 210 | 7.84 | 33.82 | 164.5 | 5.40 | 1.31 |
| 315 | 6.74 | 33.91 | 143.1 | 4.59 | 2.00 |
| 425 | 5.49 | 33.93 | 126.4 | 3.10 | 2.12 |
| 529 | 4.66 | 33.98 | 113.8 | 1.91 | 2.10 |
| 637 | 4.22 | 34.04 | 104.6 | 1.20 | 3.06 |
| 850 | 3.60 | 34.20 | 86.7 | 0.52 | 3.28 |
| 1058 | 3.17 | 34.33 | 72.8 | 0.31 | 3.61 |
| 1270 | 2.84 | 34.45 | 61.1 | 0.28 | 1.66 |


VESSEL HUGH M SMITH CRUISE 40
STATION 31 ΔD' O/ 1000 = 1.354
LAT. 45° 24' N LONG. 137° 12' W
DATE(GMT) 7/12/57 TIME(GMT) 0609
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

Weather: 50, cloud coverage 8. Wind: 150°, 14 kt. Sea: 1-3 ft. Wire angle: 07°.
BT slide: 83. Dry bulb: 56.9°F. Wet bulb: 56.4°F. Barometric pressure: 1013 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 13.76 | 32.57 | 355.4 | 5.96 | 0.59 |
| 11 | 13.75 | 32.60 | 353.0 | 5.96 | 0.54 |
| 26 | 13.66 | 32.56 | 354.1 | 6.02 | 0.48 |
| 47 | 10.76 | 32.65 | 295.4 | NG | 0.77 |
| 68 | 8.64 | 32.66 | 262.0 | 6.33 | 1.25 |
| 194 | 7.11 | 33.58 | 172.7 | 5.85 | 1.71 |
| 324 | 5.88 | 33.87 | 135.3 | 3.87 | 1.61 |
| 437 | 4.88 | 33.93 | 119.9 | 2.24 | 2.15 |
| 545 | 4.28 | 34.02 | 106.6 | 1.31 | 1.57 |
| 659 | 3.92 | 34.11 | 96.5 | NG | 2.63 |
| 881 | 3.42 | 34.25 | 81.3 | 0.43 | 2.87 |
| 1096 | 3.06 | 34.38 | 68.3 | 0.30 | 2.90 |
| 1313 | 2.80 | 34.45 | 60.8 | 0.35 | 2.42* |
| 1313 | | | | | 2.30* |

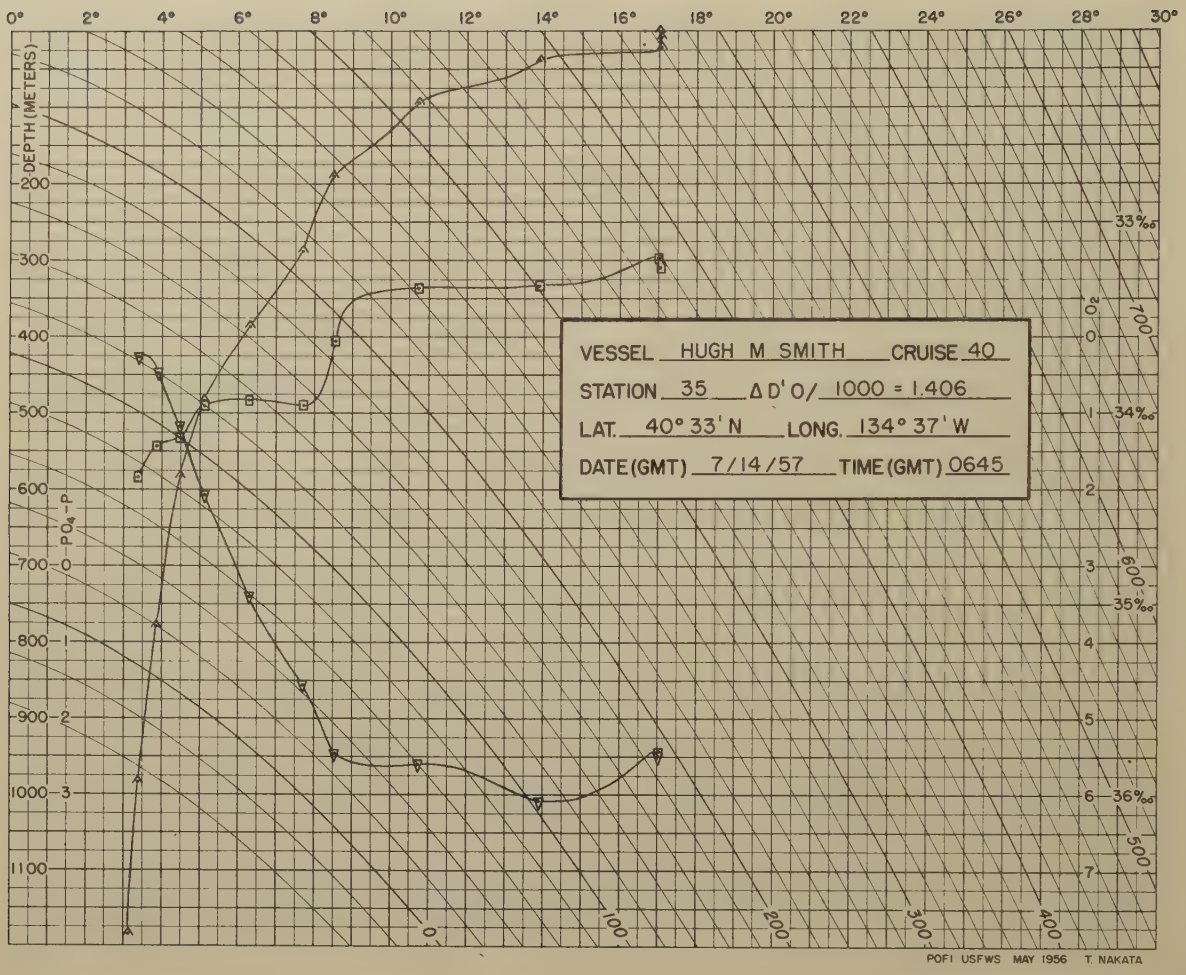
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 33 ΔD' O/ 1000 = 1.382
LAT. 43° 02' N LONG. 136° 10' W
DATE (GMT) 7/13/57 TIME (GMT) 0557
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

Weather: 03, cloud coverage 8. Wind: 310°, 06 kt. Sea: 3-5 ft. Wire angle: 03°.
BT slide: 93. Dry bulb: 61.3°F. Wet bulb: 58.9°F. Barometric pressure: 1002 mb.

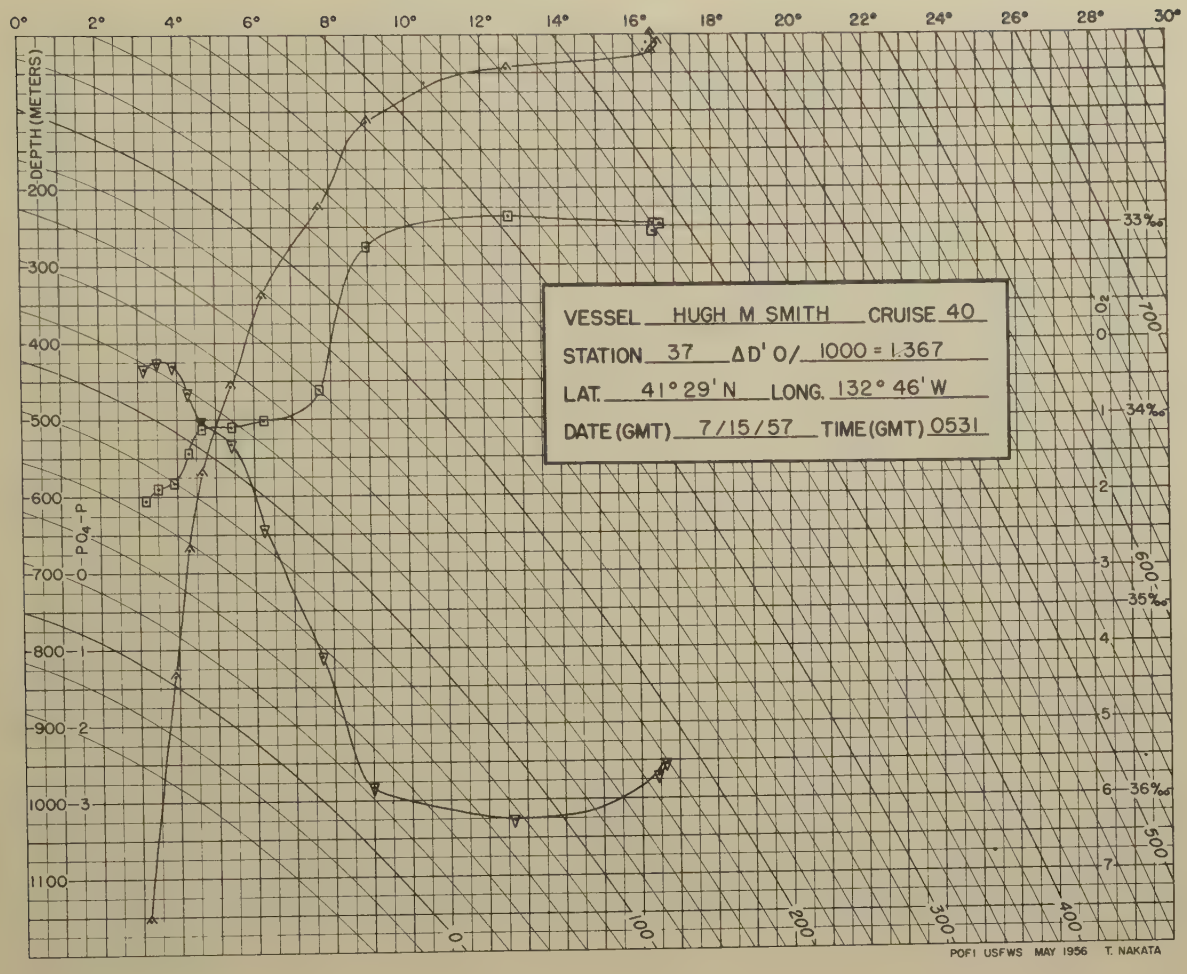
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.07 | 32.84 | 361.9 | 5.80 | NS |
| 21 | 14.91 | 32.82 | 360.0 | 5.78 | 0.52 |
| 42 | 11.74 | 32.88 | 295.2 | 6.46 | 0.62 |
| 106 | 8.64 | 32.89 | 244.9 | 6.22 | 1.10 |
| 159 | 7.34 | 33.30 | 196.3 | 5.82 | 1.33 |
| 327 | 6.10 | 33.91 | 135.1 | 3.68 | 2.22 |
| 443 | 4.95 | 33.91 | 121.9 | 2.18 | 2.60 |
| 551 | 4.41 | 34.02 | 108.0 | 1.31 | 1.40 |
| 664 | 4.03 | 34.09 | 99.0 | 0.78 | 2.92 |
| 887 | 3.52 | 34.31 | 77.7 | 0.33 | 3.04 |
| 1102 | 3.08 | 34.36 | 69.9 | 0.30 | 3.71 |
| 1316 | 2.77 | 34.45 | 60.5 | 0.39 | 1.82* |
| 1316 | | | | | 2.11* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 35 Δ D' O/ 1000 = 1.406
LAT. 40° 33' N LONG. 134° 37' W
DATE (GMT) 7/14/57 TIME (GMT) 0645
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

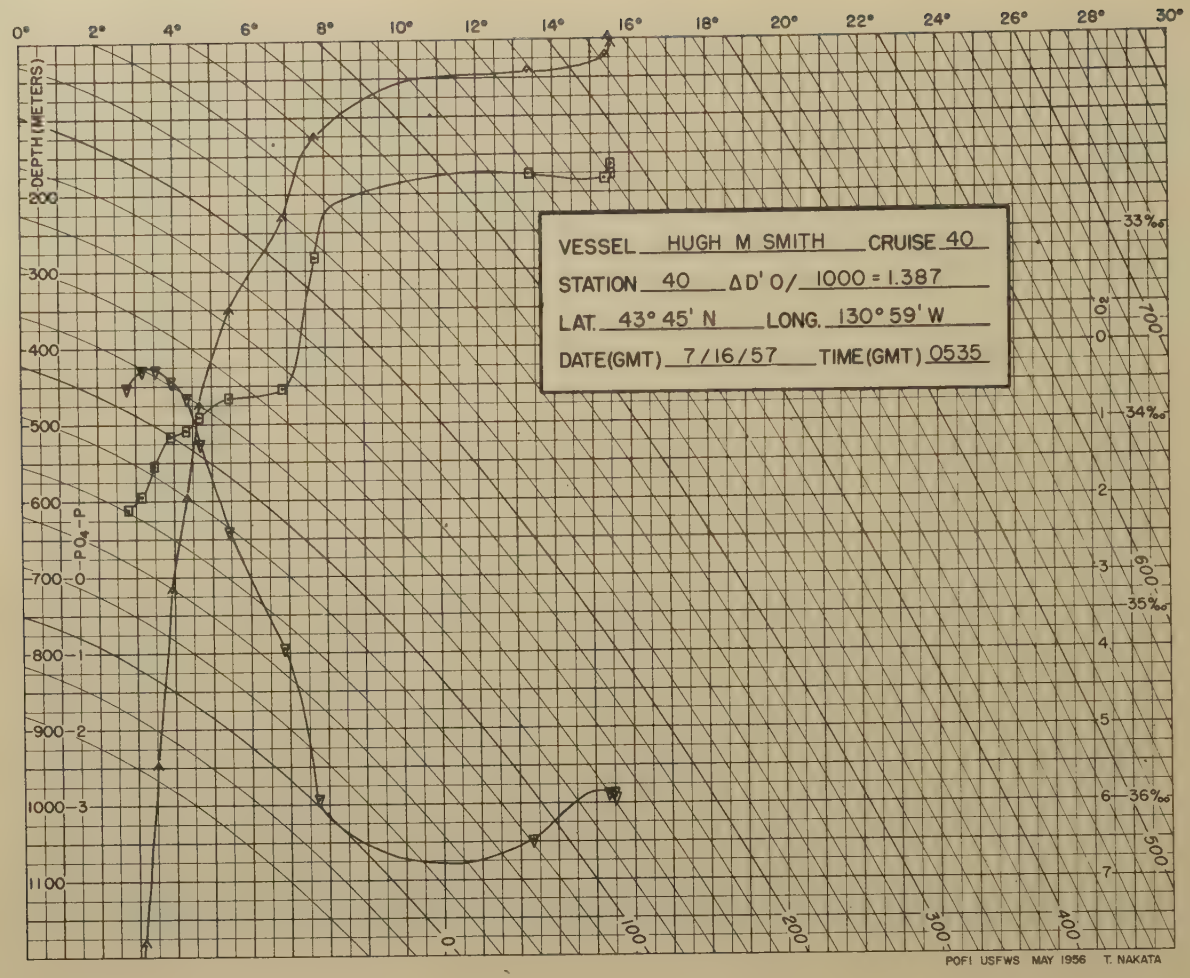
Weather: 02, cloud coverage 4. Wind: 290°, 17 kt. Sea: 5-8 ft. Wire angle: 29°.
BT slide: 104. Dry bulb: 61.8°F. Wet bulb: 59.2°F. Barometric pressure: 1016 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.02 | 33.24 | 374.4 | 5.49 | 0.50 |
| 8 | 17.02 | 33.19 | 378.2 | 5.48 | 0.51 |
| 21 | 17.04 | 33.24 | 375.0 | 5.44 | 0.48 |
| 39 | 13.89 | 33.33 | 302.2 | 6.06 | 0.48 |
| 95 | 10.74 | 33.35 | 243.3 | 5.60 | 0.75 |
| 190 | 8.55 | 33.62 | 189.3 | 5.45 | 1.19 |
| 287 | 7.70 | 33.96 | 152.0 | 4.54 | 1.57 |
| 387 | 6.32 | 33.93 | 136.4 | 3.40 | 1.89 |
| 484 | 5.11 | 33.96 | 120.0 | 2.08 | 1.79 |
| 582 | 4.47 | 34.13 | 100.4 | 1.18 | 2.56 |
| 779 | 3.85 | 34.18 | 90.5 | 0.48 | 3.16 |
| 983 | 3.38 | 34.34 | 74.1 | 0.27 | 3.21 |
| 1185 | 3.12 | NG | - | NG | NG |


VESSEL HUGH M SMITH CRUISE 40
STATION 37 ΔD' O/ 1000 = 1.367
LAT. 41° 29' N LONG. 132° 46' W
DATE (GMT) 7/15/57 TIME (GMT) 0531
DEPTH (METERS)
PO4-P
O2
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 7. Wind: 280°, 10 kt. Sea: 3-5 ft. Wire angle: 17°.
BT slide: 113. Dry bulb: 60.0°F. Wet bulb: 58.8°F. Barometric pressure: 1025 mb.

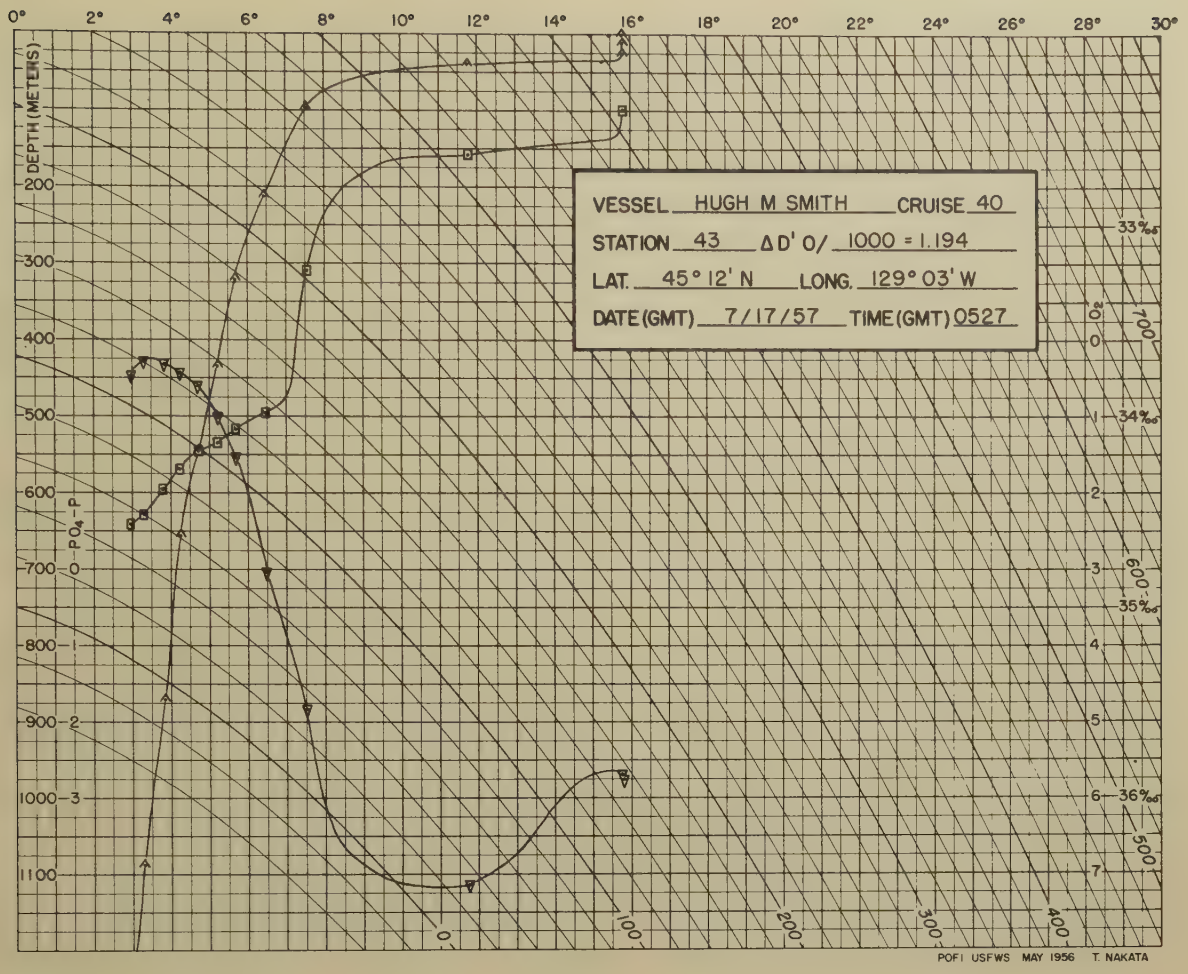
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 16.43 | 33.03 | 377.0 | 5.70 | 0.49 |
| 11 | 16.63 | 32.99 | 384.3 | 5.54 | 0.62 |
| 21 | 16.44 | 32.99 | 380.0 | 5.69 | 0.49 |
| 42 | 12.67 | 32.94 | 307.5 | 6.26 | 0.52 |
| 124 | 8.98 | 33.10 | 234.2 | 5.81 | 0.96 |
| 227 | 7.73 | 33.84 | 161.3 | 4.10 | 1.58 |
| 340 | 6.27 | 34.00 | 130.1 | 2.42 | 2.12 |
| 458 | 5.41 | 34.04 | 117.4 | 1.33 | 1.68 |
| 571 | 4.66 | 34.05 | 108.3 | 1.03 | 1.51 |
| 670 | 4.29 | 34.18 | 94.8 | 0.65 | 2.60 |
| 835 | 3.90 | 34.33 | 79.7 | 0.29 | 2.85 |
| 1000 | 3.50 | 34.36 | 73.7 | 0.27 | 2.94 |
| 1156 | 3.19 | 34.42 | 66.3 | 0.33 | 1.80 |


VESSEL HUGH M SMITH CRUISE 40
STATION 40 ΔD' O/ 1000 = 1.387
LAT. 43° 45' N LONG. 130° 59' W
DATE(GMT) 7/16/57 TIME(GMT) 0535
DEPTH (METERS)
P-PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 4. Wind: 350°, 16 kt. Sea: 3-5 ft. Wire angle: 00°.
BT slide: 125. Dry bulb: 59.4°F. Wet bulb: 58.2°F. Barometric pressure: 1028 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.49 | 32.66 | 383.9 | 5.88 | 0.57 |
| 11 | 15.50 | 32.70 | 381.0 | 5.91 | 0.51 |
| 21 | 15.39 | 32.72 | 377.2 | 5.88 | 0.40 |
| 42 | 13.35 | 32.70 | 338.0 | 6.47 | 0.58 |
| 127 | 7.74 | 33.13 | 214.3 | 5.94 | 1.02 |
| 233 | 6.88 | 33.82 | 151.7 | 3.94 | 1.63 |
| 353 | 5.44 | 33.87 | 130.2 | 2.41 | 2.46 |
| 479 | 4.68 | 33.96 | 115.5 | 1.25 | 1.43 |
| 599 | 4.36 | 34.04 | 105.9 | 0.66 | 1.47 |
| 719 | 3.93 | 34.07 | 99.5 | 0.43 | 3.00 |
| 951 | 3.53 | 34.22 | 84.6 | 0.29 | 3.33 |
| 1185 | 3.16 | 34.38 | 69.1 | 0.31 | 3.19 |
| 1403 | 2.80 | 34.45 | 60.8 | 0.52 | 1.40* |
| 1403 | | | | | 1.45* |

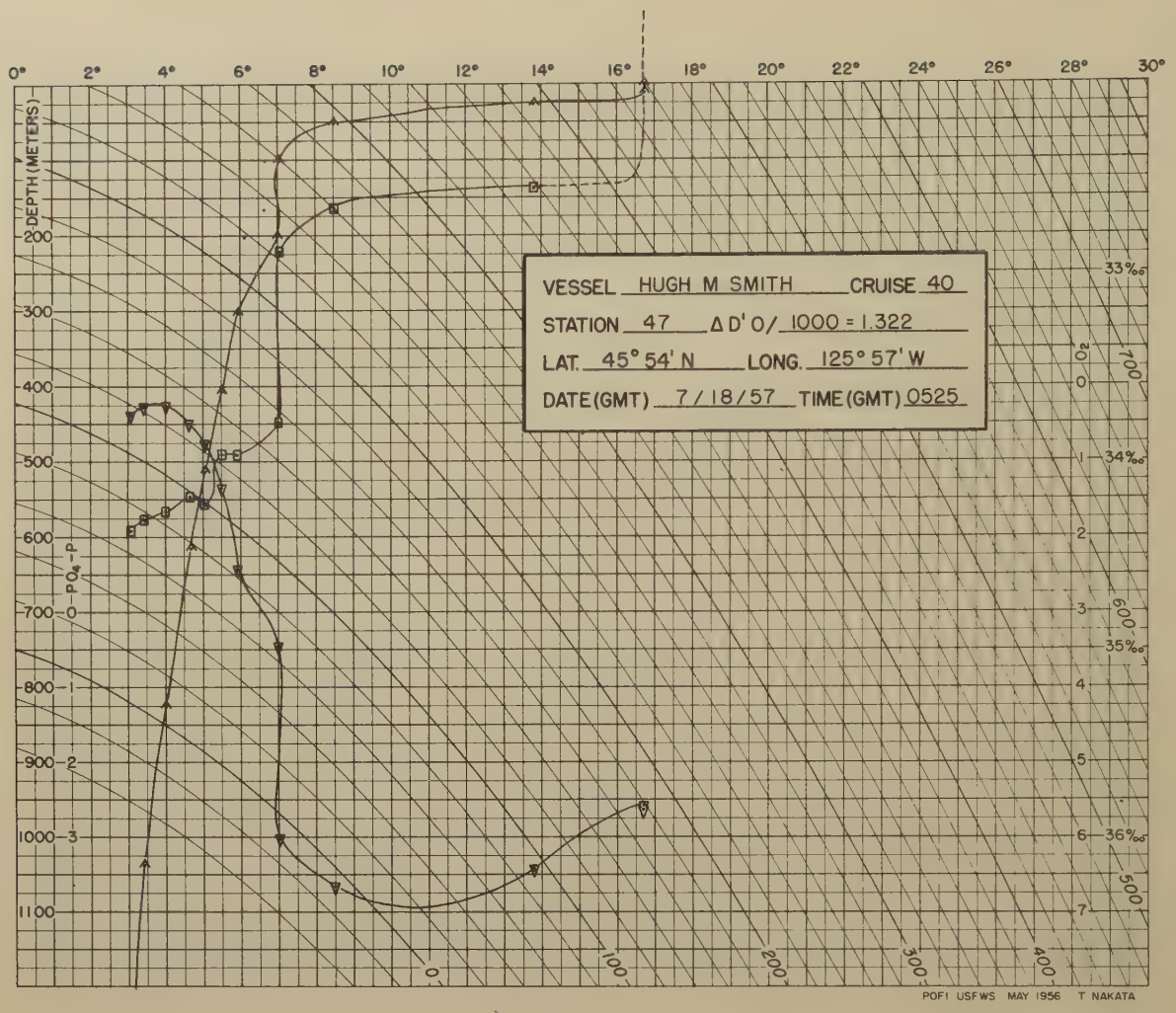
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 43 ΔD' O/ 1000 = 1.194
LAT. 45° 12' N LONG. 129° 03' W
DATE (GMT) 7/17/57 TIME (GMT) 0527
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 6. Wind: 340°, 24 kt. Sea: 3-5 ft. Wire angle: 30°.
BT slide: 134. Dry bulb: 58.8°F. Wet bulb: 57.6°F. Barometric pressure: 1029 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.78 | NG | - | 5.76 | 0.45 |
| 10 | 15.79 | 32.39 | 409.9 | 5.75 | 0.45 |
| 24 | 15.78 | 32.39 | 409.8 | 5.70 | 0.43 |
| 38 | 11.76 | 32.63 | 313.9 | 7.14 | 0.86 |
| 96 | 7.54 | 33.24 | 203.3 | 4.83 | 1.48 |
| 212 | 6.46 | 33.98 | 134.1 | 3.04 | 1.23 |
| 320 | 5.68 | 34.07 | 118.1 | 1.54 | 1.71 |
| 435 | 5.21 | 34.14 | 107.6 | 1.01 | 2.26 |
| 546 | 4.71 | 34.18 | 99.2 | 0.59 | 1.51 |
| 655 | 4.24 | 34.27 | 87.5 | 0.43 | 2.57 |
| 871 | 3.82 | 34.38 | 75.2 | 0.31 | 2.85 |
| 1086 | 3.30 | 34.51 | 60.7 | 0.28 | 2.94 |
| 1291 | 2.95 | 34.56 | 53.7 | 0.46 | 1.47* |
| 1291 | | | | | 1.50* |

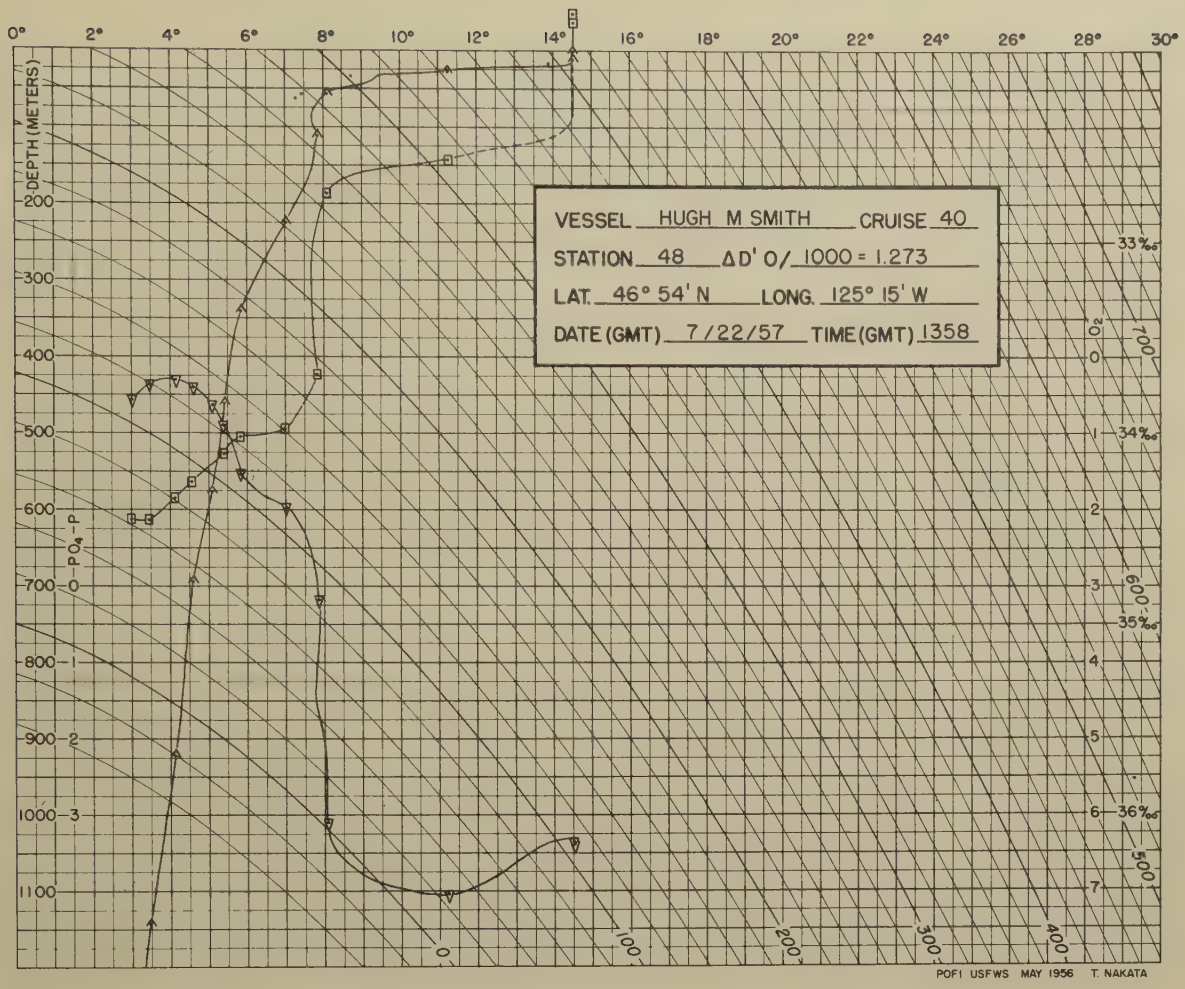
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.




Weather: 01, cloud coverage 4. Wind: 340°, 19 kt. Sea: 5-8 ft. Wire angle: 29°.
BT slide: 145. Dry bulb: 60.7°F. Wet bulb: 58.3°F. Barometric pressure: 1021 mb.

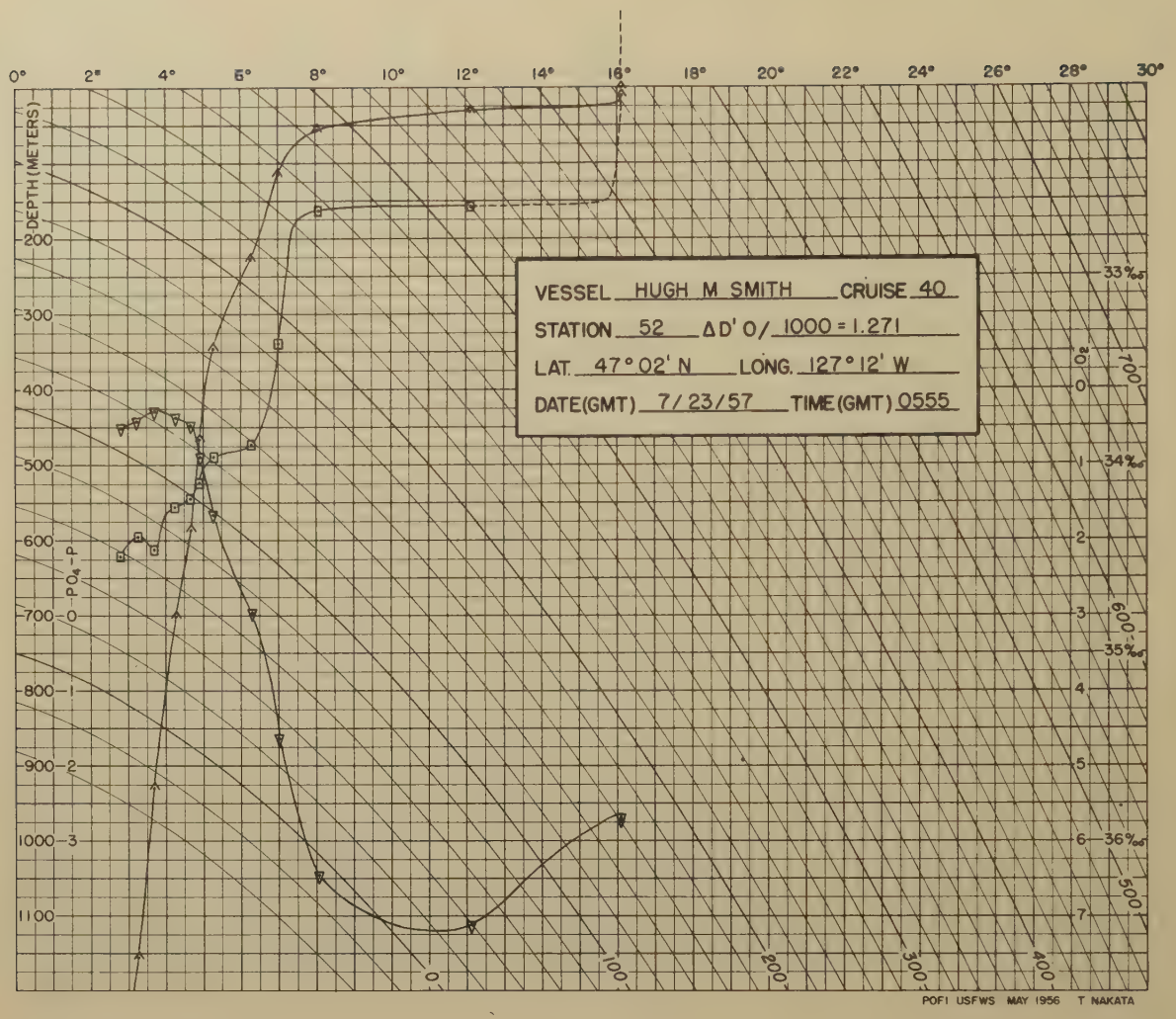
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 16.72 | NG | - | 5.62 | 0.47 |
| 10 | 16.72 | NG | - | 5.58 | 0.48 |
| 23 | 13.80 | 32.54 | 358.4 | 6.42 | 0.56 |
| 50 | 8.52 | 32.65 | 261.0 | 6.65 | 0.98 |
| 100 | 7.04 | 32.88 | 223.9 | 6.01 | 1.29 |
| 200 | 7.00 | 33.78 | 156.1 | 3.44 | 1.99 |
| 302 | 5.94 | 33.96 | 129.4 | 2.42 | 1.93 |
| 408 | 5.51 | 33.96 | 124.7 | 1.34 | 1.70 |
| 513 | 5.06 | 34.22 Q | 99.8 | 0.77 | 1.84 |
| 617 | 4.66 | 34.18 | 98.6 | 0.49 | 3.08 |
| 825 | 4.02 | 34.27 | 85.3 | 0.25 | 2.79 |
| 1038 | 3.44 | 34.31 | 77.0 | 0.27 | 2.54 |
| 1242 | 3.10 | 34.36 | 70.1 | 0.36 | 2.37* |
| 1242 | | | | | 2.23* |

* Values of duplicate did not agree within 0.02 μg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 48 ΔD' O/ 1000 = 1.273
LAT. 46° 54' N LONG. 125° 15' W
DATE (GMT) 7/22/57 TIME (GMT) 1358
DEPTH (METERS)
POF1 USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 8. Wind: 320°, 07 kt. Sea: 1-3 ft. Wire angle: 16°.
BT slide: 149. Dry bulb: 58.5°F. Wet bulb: 57.8°F. Barometric pressure: 1017 mb.

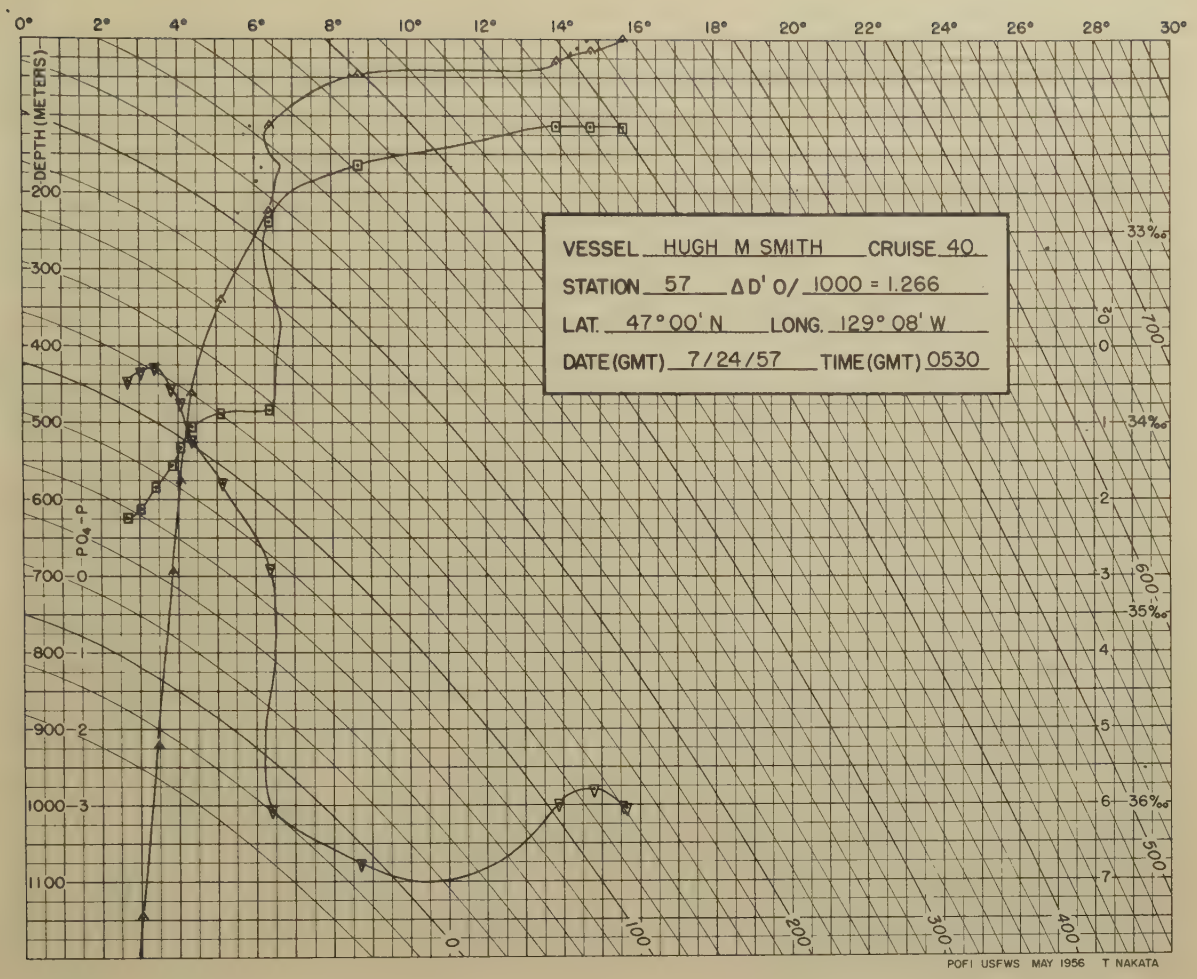
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 14.54 | 31.80 | 427.5 | 6.38 | 0.52 |
| 10 | 14.54 | 31.85 | 423.8 | 6.35 | 0.55 |
| 25 | 11.25 | 32.57 | 309.6 | 7.04 | 0.62 |
| 56 | 8.08 | 32.74 | 248.0 | 6.08 | 1.04 |
| 112 | 7.84 | 33.69 | 174.1 | 3.18 | 1.92 |
| 225 | 7.02 | 33.98 | 141.6 | 1.97 | 2.22 |
| 341 | 5.84 | 34.02 | 123.7 | 1.53 | 2.33 |
| 461 | 5.41 | 34.11 | 112.1 | 0.87 | 2.62 |
| 577 | 5.10 | NG | - | 0.63 | 2.53 |
| 694 | 4.60 | 34.25 | 92.8 | 0.41 | 2.85 |
| 920 | 4.15 | 34.34 | 81.2 | 0.31 | 2.83 |
| 1143 | 3.46 | 34.45 | 66.5 | 0.36 | 2.87 |
| 1353 | 3.02 | 34.45 | 62.6 | 0.56 | 2.11 |


VESSEL HUGH M SMITH CRUISE 40
STATION 52 ΔD' O/ 1000 = 1.271
LAT. 47° 02' N LONG. 127° 12' W
DATE(GMT) 7/23/57 TIME(GMT) 0555
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage not recorded. Wind: 260°, 15 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 158. Dry bulb: 62.3°F. Wet bulb: 58.6°F. Barometric pressure: 1020 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 16.13 | 31.47 | 484.5 | 5.70 | 0.40 |
| 10 | 16.11 | 31.49 | 482.7 | 5.68 | 0.42 |
| 31 | 12.12 | 32.63 | 320.3 | 7.11 | 0.63 |
| 56 | 8.06 | 32.65 | 254.5 | 6.44 | 0.93 |
| 113 | 7.00 | 33.35 | 188.1 | 4.62 | 1.58 |
| 228 | 6.32 | 33.89 | 139.3 | 2.96 | 1.98 |
| 345 | 5.27 | 33.96 | 121.7 | 1.67 | 2.35 |
| 467 | 4.90 | 34.09 | 107.9 | 0.89 | 2.68 |
| 585 | 4.66 | 34.18 | 98.6 | 0.47 | 1.38 |
| 702 | 4.26 | 34.22 | 91.5 | 0.37 | 1.60 |
| 928 | 3.68 | 34.45 Q | 68.5 | 0.28 | 2.85 |
| 1154 | 3.24 | 34.38 | 69.9 | 0.41 | 2.83 |
| 1362 | 2.78 | 34.49 | 57.6 | 0.50 | 1.66* |
| 1362 | | | | | 1.31* |

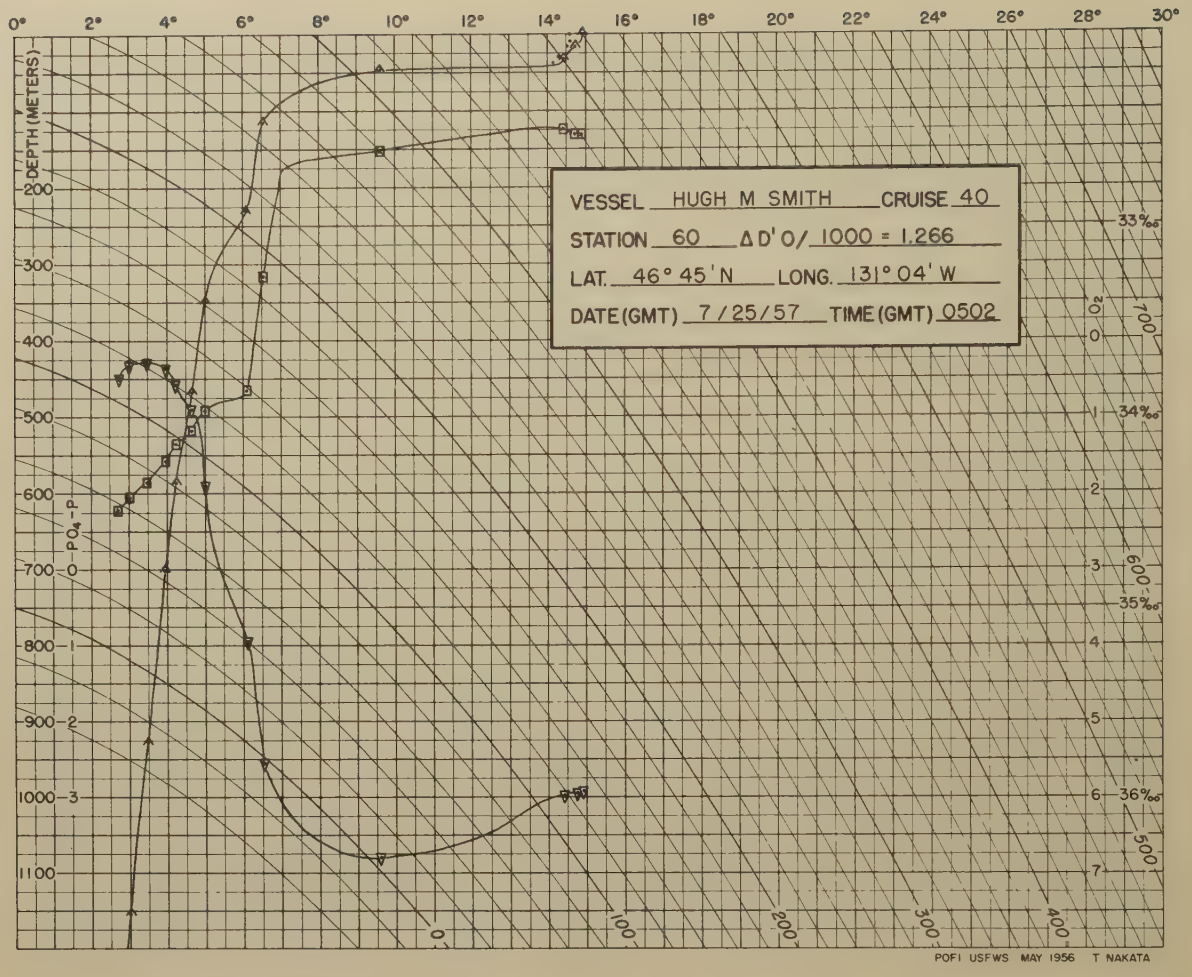
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 57 ΔD' O/ 1000 = 1.266
LAT. 47° 00' N LONG. 129° 08' W
DATE (GMT) 7/24/57 TIME (GMT) 0530
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 7. Wind: 280°, 06 kt. Sea: < 1 ft. Wire angle: 13°.
BT slide: 167. Dry bulb: 59.8°F. Wet bulb: 58.1°F. Barometric pressure: 1026 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.64 | 32.45 | 402.3 | 6.03 | 0.44 |
| 15 | 14.80 | 32.45 | 385.0 | 5.79 | 0.51 |
| 30 | 13.88 | 32.45 | 366.8 | 5.98 | 0.56 |
| 46 | 8.71 | 32.66 | 263.0 | 6.76 | 0.86 |
| 112 | 6.42 | 32.95 | 210.7 | 6.06 | 1.30 |
| 226 | 6.40 | 33.93 | 137.2 | 2.90 | 1.97 |
| 342 | 5.14 | 33.95 | 121.1 | 1.79 | 2.11 |
| 463 | 4.37 | 34.02 | 107.5 | 1.21 | 2.57 |
| 578 | 4.06 | 34.13 | 96.2 | 0.72 | 1.30 |
| 696 | 3.83 | 34.22 | 87.2 | 0.53 | 2.22 |
| 922 | 3.41 | 34.33 | 75.2 | 0.29 | 2.77 |
| 1147 | 3.04 | 34.45 | 62.8 | 0.33 | 2.85 |
| 1360 | 2.71 | 34.49 | 57.1 | 0.45 | 1.93* |
| 1360 | | | | | 1.79* |

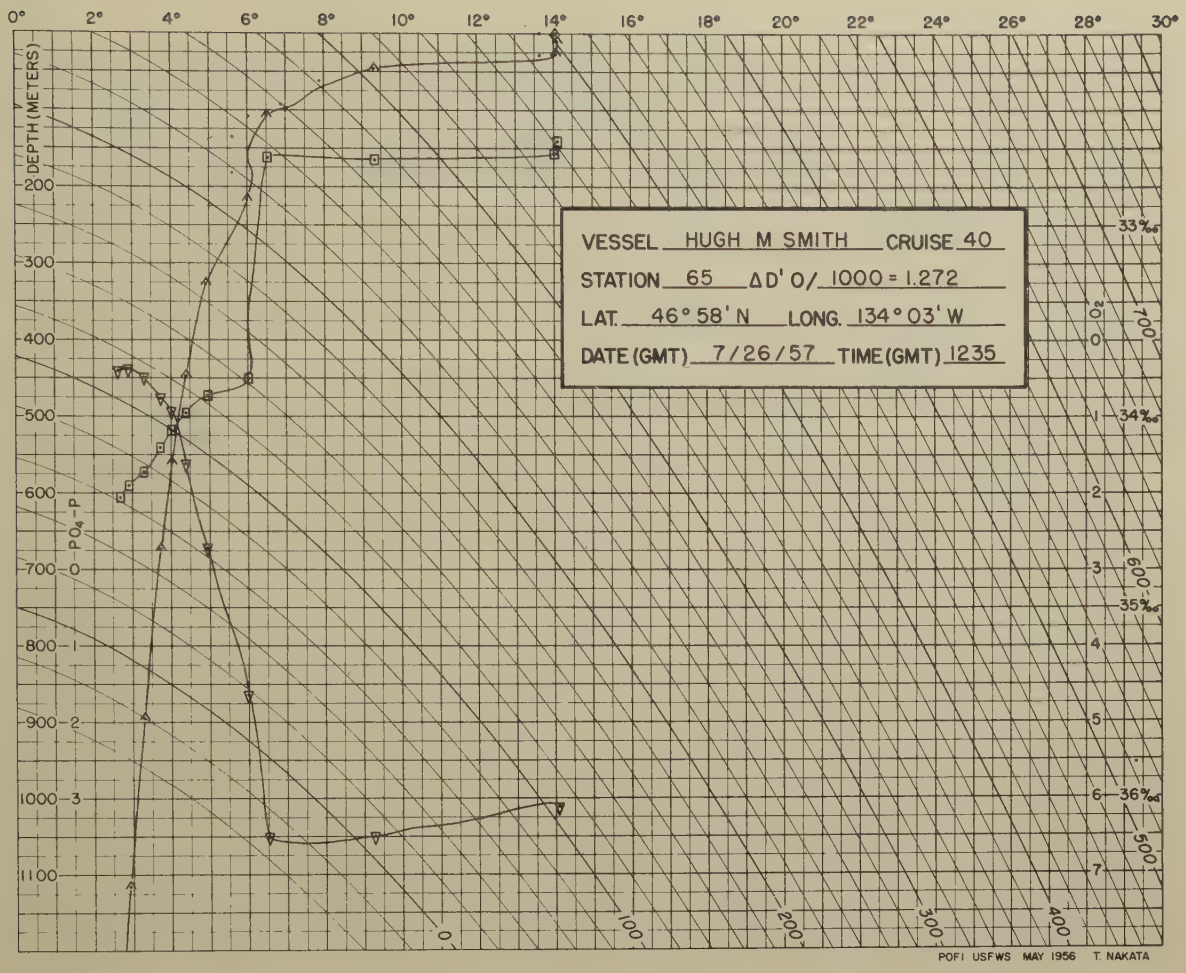
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 60 Δ D' O/ 1000 = 1.266
LAT. 46° 45' N LONG. 131° 04' W
DATE (GMT) 7/25/57 TIME (GMT) 0502
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 8. Wind: 220°, 14 kt. Sea: 1-3 ft. Wire angle: 08°.
BT slide: 178. Dry bulb: 61.8°F. Wet bulb: 60.2°F. Barometric pressure: 1020 mb.

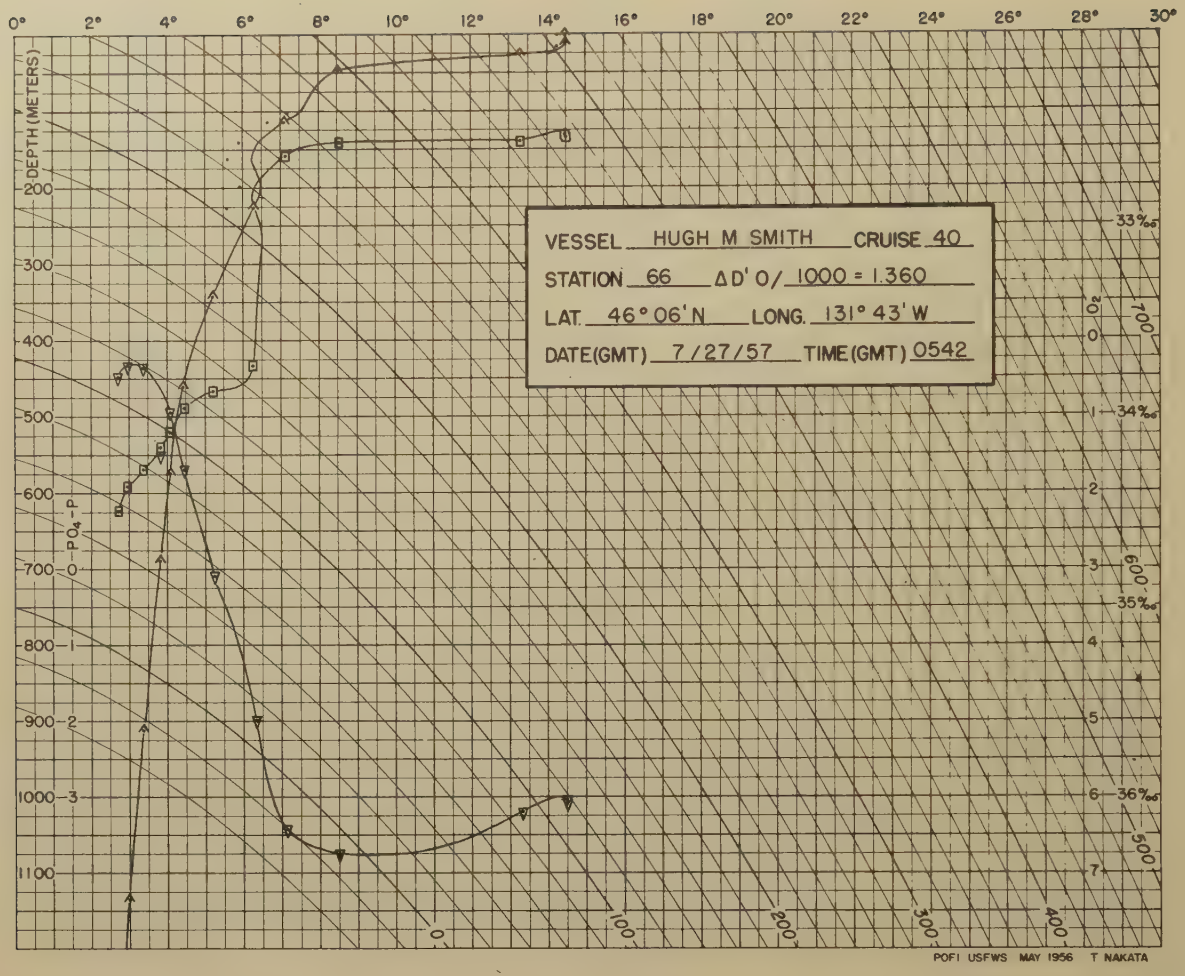
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 14.92 | 32.52 | 382.2 | 5.93 | 0.47 |
| 16 | 14.77 | 32.52 | 379.1 | 5.95 | 0.58 |
| 31 | 14.42 | 32.49 | 374.3 | 5.98 | 0.54 |
| 47 | 9.62 | 32.61 | 280.3 | 6.80 | 0.83 |
| 115 | 6.56 | 33.26 | 189.1 | 5.54 | 1.38 |
| 230 | 6.11 | 33.87 | 138.2 | 3.95 | 1.79 |
| 348 | 5.00 | 33.96 | 118.8 | 1.89 | 2.11 |
| 469 | 4.66 | 34.07 | 106.9 | 0.90 | 2.61 |
| 585 | 4.25 | 34.14 | 97.4 | 0.59 | 1.17 |
| 700 | 3.97 | 34.23 | 87.8 | 0.36 | 2.81 |
| 928 | 3.46 | 34.34 | 74.9 | 0.31 | 2.82 |
| 1155 | 3.00 | 34.42 | 64.6 | 0.33 | 2.81 |
| 1369 | 2.72 | 34.49 | 57.1 | 0.51 | 1.38* |
| 1369 | | | | | 1.49* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 65 ΔD' O/ 1000 = 1.272
LAT. 46° 58' N LONG. 134° 03' W
DATE (GMT) 7/26/57 TIME (GMT) 1235
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 63, cloud coverage 8. Wind: 250°, 20 kt. Sea: 3-5 ft. Wire angle: 19°.
BT slide: 189. Dry bulb: 55.0°F. Wet bulb: 54.2°F. Barometric pressure: 1022 mb.

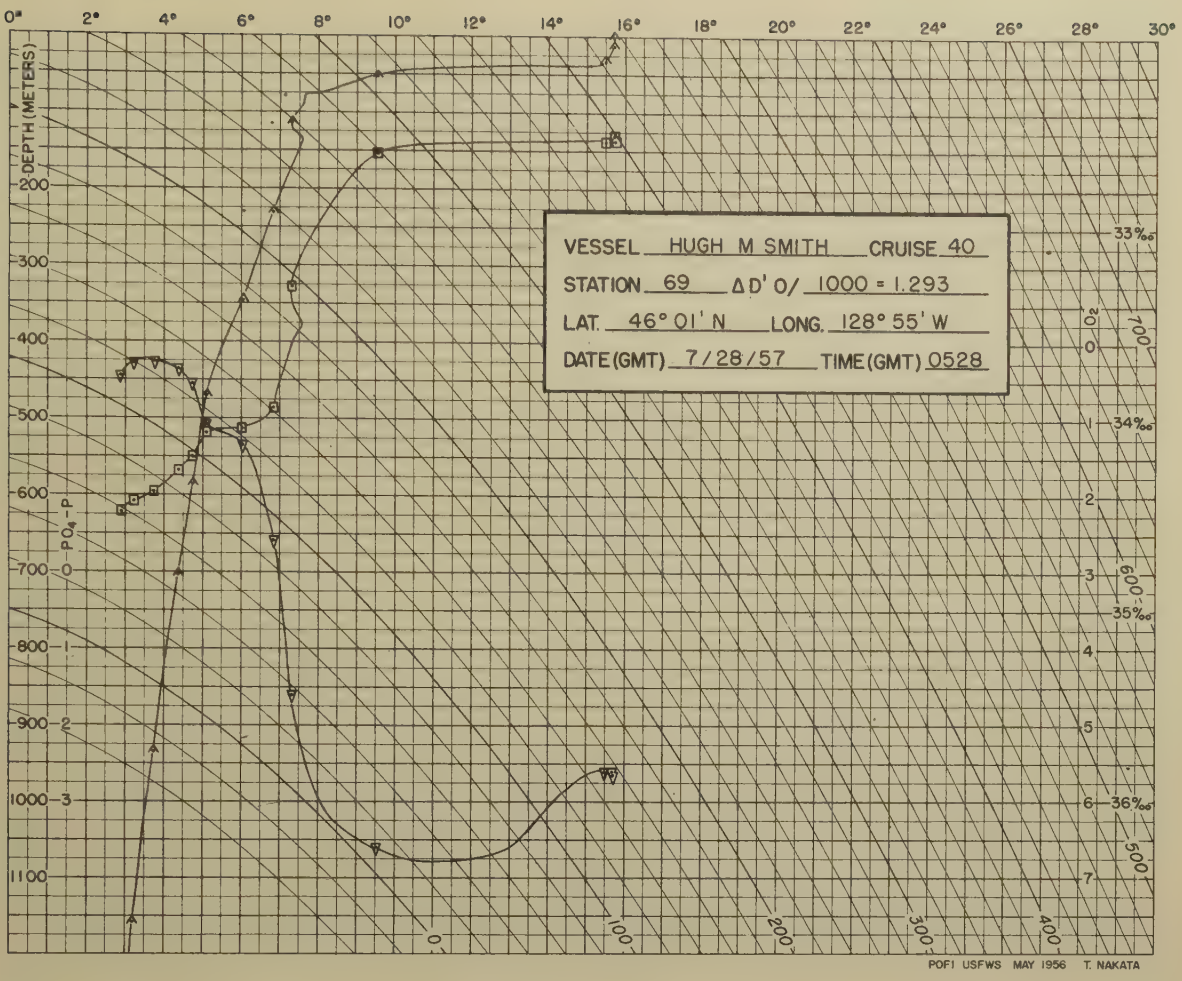
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 14.08 | 32.57 | 361.8 | 6.07 | 0.51 |
| 10 | 14.10 | 32.56 | 362.9 | 6.11 | 0.52 |
| 25 | 14.06 | 32.63 | 357.0 | 6.07 | 0.55 |
| 44 | 9.32 | 32.66 | 272.1 | 6.50 Q | 0.71 |
| 108 | 6.57 | 32.65 Q | 235.0 | 6.50 | 1.10 |
| 217 | 6.01 | 33.80 | 142.1 | 4.65 | 0.75 |
| 328 | 4.96 | 33.89 | 123.5 | 2.72 | 1.97 |
| 447 | 4.41 | 33.98 | 111.2 | 1.63 | 2.46 |
| 560 | 4.03 | 34.07 | 100.5 | 0.94 | 0.85 |
| 673 | 3.76 | 34.16 | 91.0 | 0.77 | 1.23 |
| 894 | 3.33 | 34.29 | 77.6 | 0.50 | 2.76 |
| 1114 | 2.92 | 34.36 | 68.6 | 0.38 | 1.51 |
| 1323 | 2.66 | 34.42 | 61.8 | 0.41 | NS |


VESSEL HUGH M SMITH CRUISE 40
STATION 66 ΔD' O/ 1000 = 1.360
LAT. 46° 06' N LONG. 131° 43' W
DATE(GMT) 7/27/57 TIME(GMT) 0542
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 53, cloud coverage not recorded. Wind: 250°, 20 kt. Sea: 5-8 ft. Wire angle: 21°, 18°. BT slide: 197. Dry bulb: 60.2°F. Wet bulb: 60.2°F. Barometric pressure: 1017 mb.

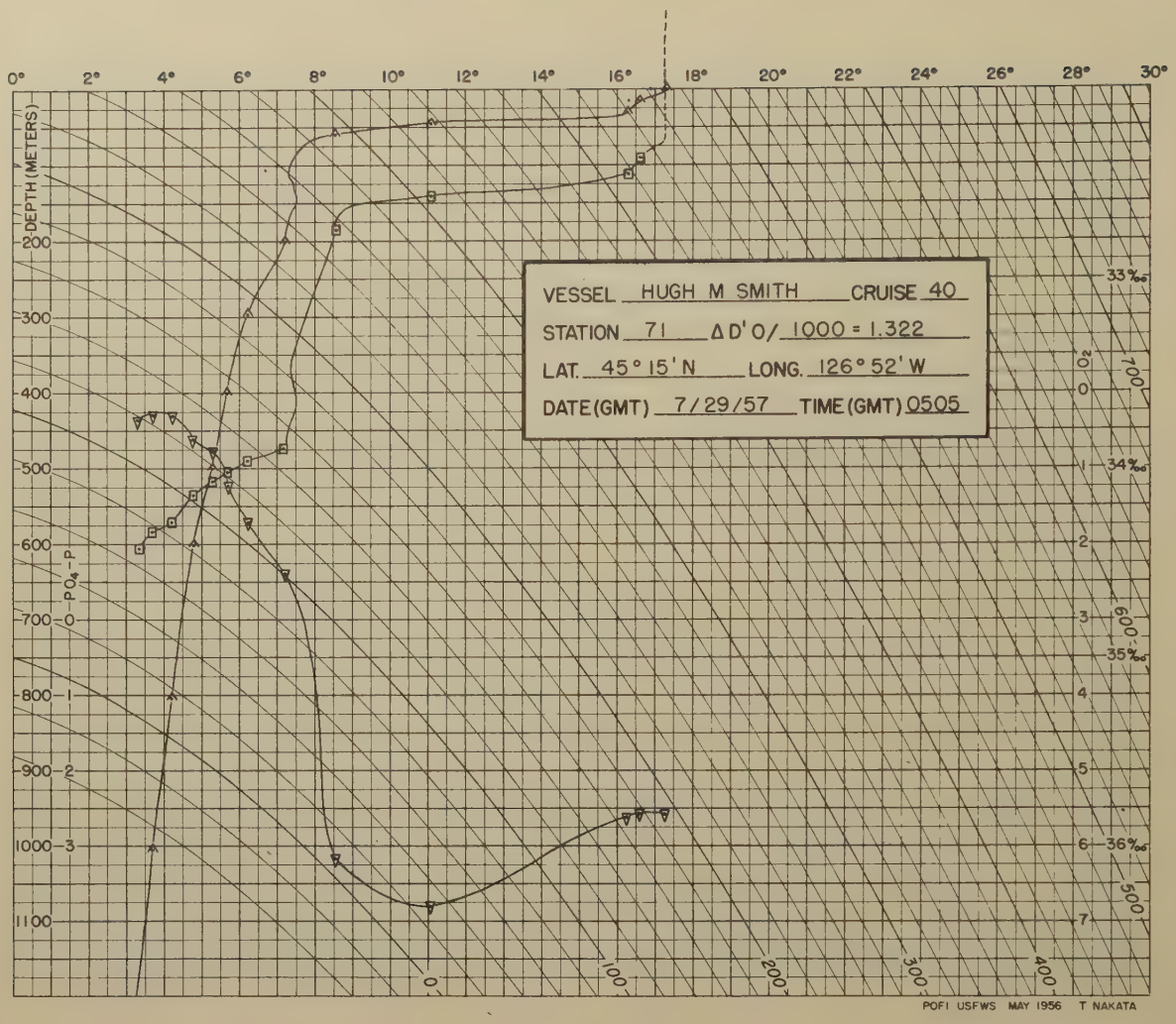
| | Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|
| I | 0 | 14.49 | 32.53 | 373.0 | 6.08 | 0.57 |
| II | 10 | 14.49 | 32.52 | 373.5 | 6.04 | 0.58 |
| | 26 | 13.32 | 32.55 | 348.4 | 6.20 | 0.49 |
| | 46 | 8.56 | 32.56 | 268.2 | 6.73 | 1.09 |
| | 113 | 7.12 | 32.63 | 243.4 | 6.42 | 1.27 |
| | 226 | 6.34 | 33.73 | 151.5 | 4.99 | 1.59 |
| | 341 | 5.22 | 33.86 | 128.8 | 3.09 | 1.89 |
| | 460 | 4.46 | 33.95 | 114.0 | 1.70 | 2.45 |
| | 574 | 4.08 | 34.08 | 100.1 | 0.94 P | 1.25 |
| | 689 | 3.82 | 34.16 | 91.7 | 1.49 | 2.73 |
| | 911 | 3.38 | 34.27 | 79.3 | 0.36 | 1.21 |
| | 1134 | 2.98 | 34.36 | 68.8 | 0.32 | 2.82 |
| | 1348 | 2.74 | 34.49 | 57.3 | 0.46 | 1.38* |
| | 1348 | | | | | 1.55* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 69 ΔD' O/ 1000 = 1.293
LAT. 46° 01' N LONG. 128° 55' W
DATE (GMT) 7/28/57 TIME (GMT) 0528
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 40, cloud coverage 8. Wind: 220°, 18 kt. Sea: 3-5 ft. Wire angle: 06°, 11°. BT slide: 204. Dry bulb: 62.0°F. Wet bulb: 62.0°F. Barometric pressure: 1019 mb.

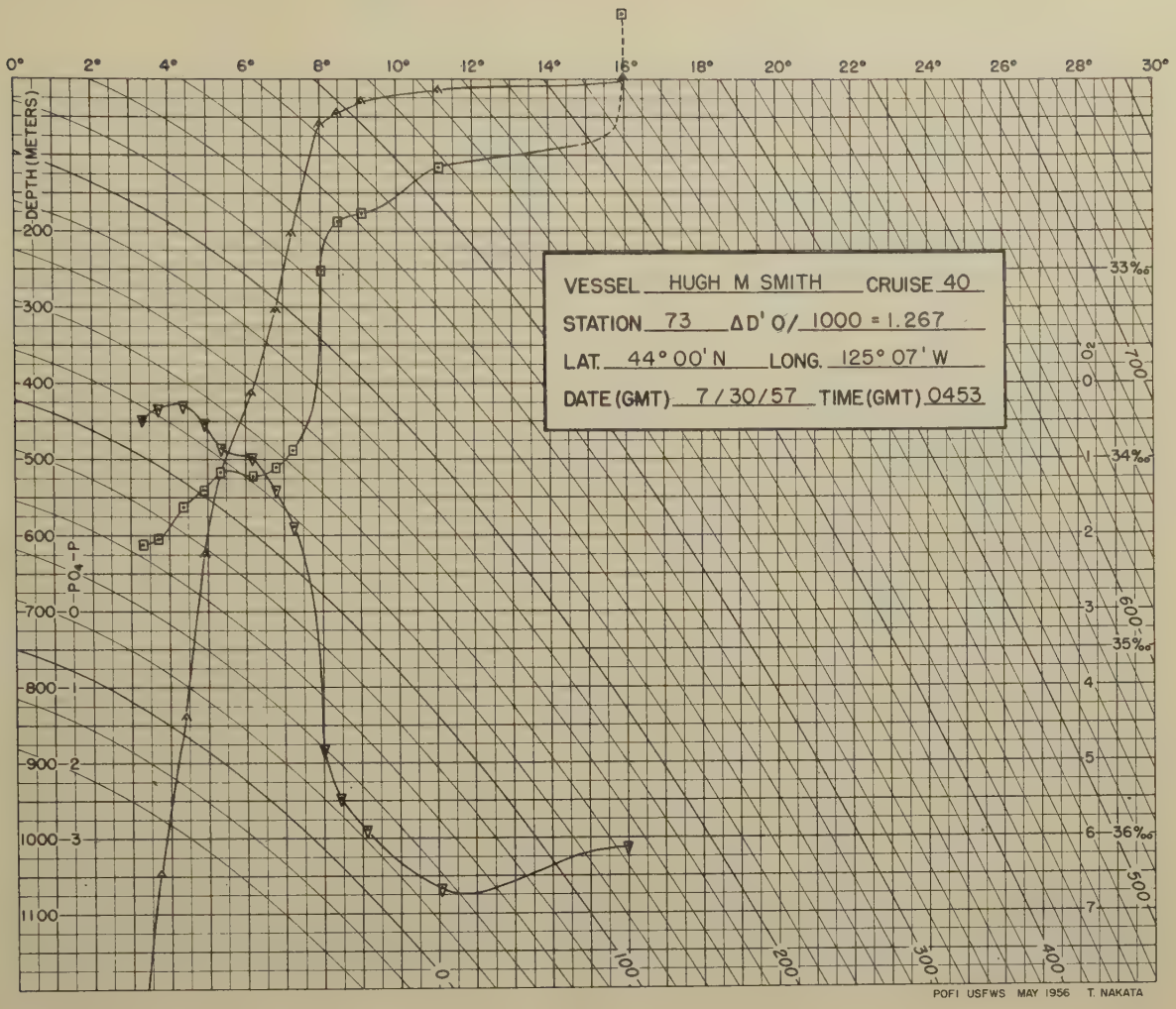
| | Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 15.71 | 32.52 | 398.9 | 5.62 | 0.68 |
| | 10 | 15.72 | 32.54 | 397.5 | 5.61 | 0.53 |
| | 31 | 15.48 | 32.54 | 392.3 | 5.61 | 0.40 |
| I | 52 | 9.54 | 32.61 | 279.1 | 6.60 | 0.95 |
| II | 114 | 7.32 | 33.34 | 193.1 | 4.62 | 1.93 |
| | 230 | 6.84 | 33.95 | 141.4 | 2.59 | 2.14 |
| | 347 | 6.04 | 34.05 | 123.8 | 1.35 | 2.40 |
| | 470 | 5.10 | 34.07 | 111.5 | 1.07 | 2.87 |
| | 587 | 4.77 | 34.20 | 98.2 | 0.54 | 1.54 |
| | 704 | 4.40 | 34.27 | 89.2 | 0.35 | 3.30 |
| | 933 | 3.76 | 34.38 | 74.6 | 0.26 | 3.14 |
| | 1159 | 3.22 | 34.43 | 66.0 | 0.29 | 2.36 |
| | 1373 | 2.88 | 34.49 | 58.4 | 0.44 | 2.16 |


VESSEL HUGH M SMITH CRUISE 40
STATION 71 ΔD'O/1000 = 1.322
LAT. 45° 15' N LONG. 126° 52' W
DATE(GMT) 7/29/57 TIME(GMT) 0505
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 20, cloud coverage 8. Wind: 330°, 10 kt. Sea: 1-3 ft. Wire angle: 25°.
BT slide: 212. Dry bulb: 62.0°F. Wet bulb: 62.0°F. Barometric pressure: 1017 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.27 | 31.36 | 517.6 | 5.57 | 0.57 |
| 15 | 16.60 | 32.36 | 429.7 | 5.57 | 0.54 |
| 30 | 16.26 | 32.44 | 416.2 | 5.62 | 0.57 |
| 44 | 11.06 | 32.56 | 307.2 | 6.80 | 0.74 |
| 58 | 8.57 | 32.74 | 255.0 | 6.17 | 1.02 |
| 200 | 7.22 | 33.89 | 150.9 | 2.38 | 2.36 |
| 296 | 6.26 | 33.96 | 133.3 | 1.71 | 2.58 |
| 400 | 5.70 | 34.02 | 122.0 | 1.23 | 2.97 |
| 499 | 5.31 | 34.07 | 114.0 | 0.79 | 1.41 |
| 601 | 4.78 | 34.14 | 102.8 | 0.61 | 2.76 |
| 805 | 4.22 | 34.29 | 85.8 | 0.29 | 3.42 |
| 1005 | 3.72 | 34.34 | 77.3 | 0.29 | 1.57 |
| 1210 | 3.26 | 34.43 | 66.3 | 0.36 | 1.94* |
| 1210 | | | | | 1.80* |

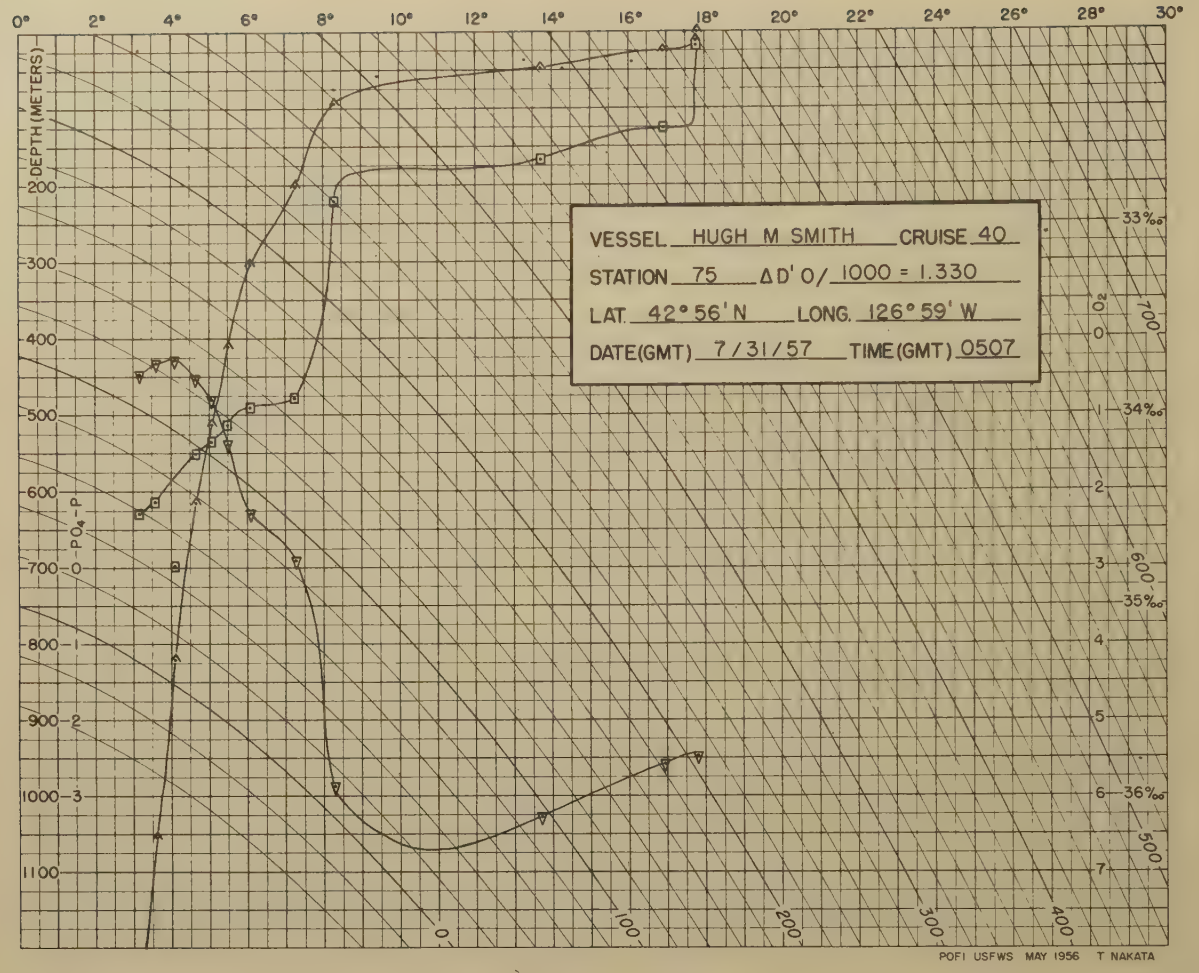
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 73 ΔD' O/ 1000 = 1.267
LAT. 44° 00' N LONG. 125° 07' W
DATE (GMT) 7/30/57 TIME (GMT) 0453
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 7. Wind: 330°, 17 kt. Sea: 1-3 ft. Wire angle: 23°.
BT slide: 221. Dry bulb: 62.6°F. Wet bulb: 62.0°F. Barometric pressure: 1018 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.98 | 31.66 | 467.5 | 6.13 | 0.64 |
| 15 | 11.10 | 32.46 | 315.2 | 6.66 | 0.95 |
| 30 | 9.08 | 32.70 | 265.3 | 5.89 | 1.18 |
| 45 | 8.46 | 32.75 | 252.8 | 5.46 | 1.56 |
| 60 | 8.00 | 33.01 | 226.9 | 4.81 | 1.69 |
| 205 | 7.26 | 33.95 | 146.9 | 1.88 | 1.99 |
| 306 | 6.80 | 34.04 | 134.0 | 1.40 | 2.06 |
| 414 | 6.18 | 34.09 | 122.5 | 0.98 | 2.37 |
| 517 | 5.35 | 34.07 | 114.4 | 0.85 | 1.95 |
| 626 | 4.92 | 34.16 | 102.9 | 0.53 | 2.39 |
| 840 | 4.38 | 34.25 | 90.4 | 0.29 | 3.18 |
| 1049 | 3.72 | 34.42 | 71.3 | 0.33 | 2.12 |
| 1261 | 3.32 | 34.45 | 65.4 | 0.46 | 2.22* |
| 1261 | | | | | 2.34* |

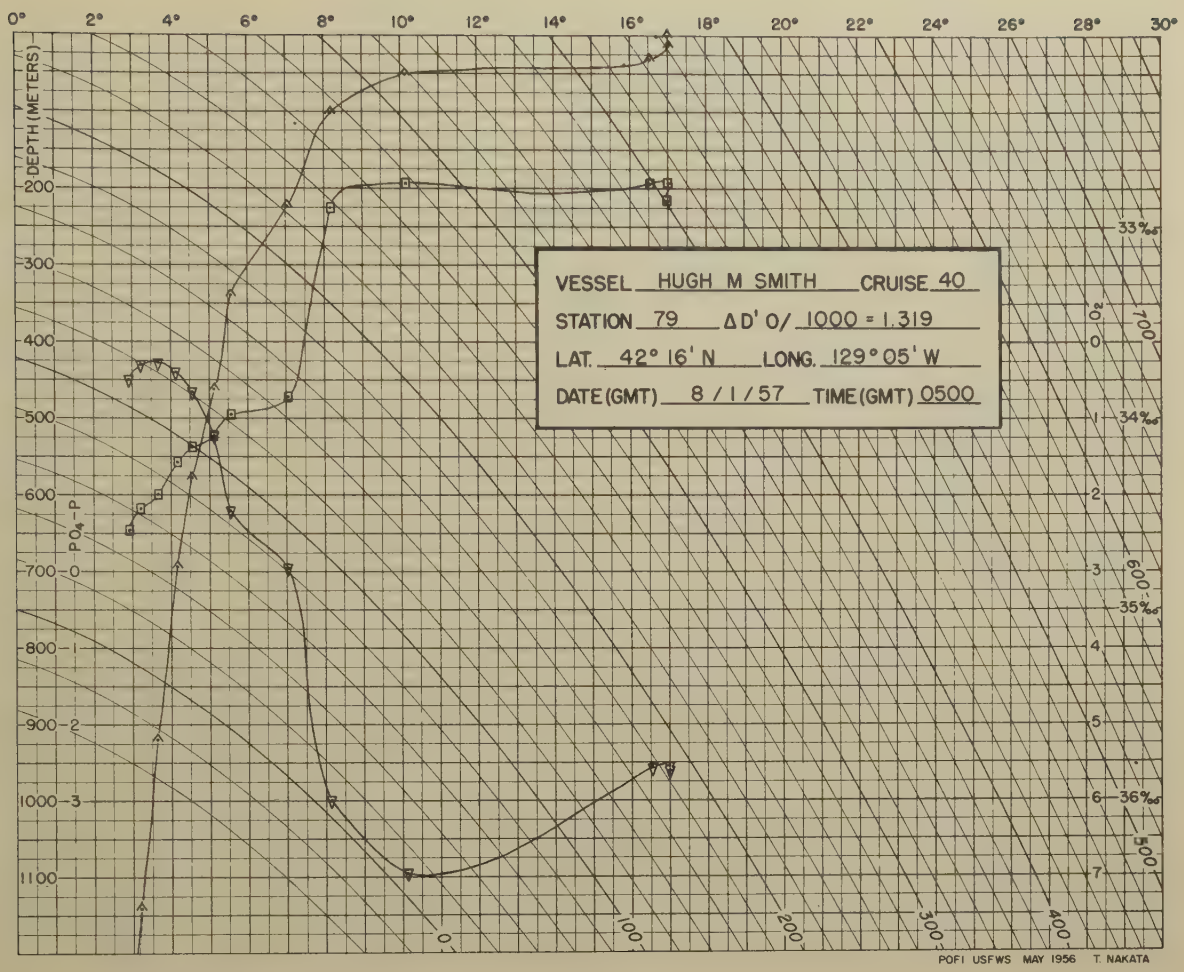
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 75 ΔD' O/ 1000 = 1.330
LAT. 42° 56' N LONG. 126° 59' W
DATE(GMT) 7/31/57 TIME(GMT) 0507
DEPTH (METERS)
PO4 - P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 2. Wind: 330°, 14 kt. Sea: 1-3 ft. Wire angle: 27°, 29°. BT slide: 230, Dry bulb: 62.9°F. Wet bulb: 60.7°F. Barometric pressure: 1021 mb.

| | Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 17.80 | 32.07 | 477.5 | 5.47 | 0.44 |
| | 10 | 17.78 | 32.07 | 477.0 | 5.46 | 0.43 |
| | 23 | 16.93 | 32.50 | 426.5 | 5.57 | 0.50 |
| | 46 | 13.73 | 32.66 | 348.2 | 6.28 | 0.53 |
| | 92 | 8.30 | 32.88 | 241.0 | 5.86 | 1.44 |
| | 201 | 7.30 | 33.91 | 150.3 | 2.89 | 2.42 |
| | 303 | 6.10 | 33.96 | 131.3 | 2.28 | 2.67 |
| | 409 | 5.53 | 34.05 | 118.0 | 1.39 | 3.04 |
| | 512 | 5.08 | 34.14 | 106.0 | 0.80 | 3.00 |
| | 614 | 4.66 | 34.20 | 97.2 | 0.53 | 3.40 |
| I | 819 | 4.10 | 34.79 | 47.0 | 0.27 | 3.58 |
| II | 1053 | 3.61 | 34.45 | 68.0 | 0.33 | 2.28 |
| | 1254 | 3.18 | 34.51 | 59.5 | 0.47 | 3.14* |
| | 1254 | | | | | 2.72* |

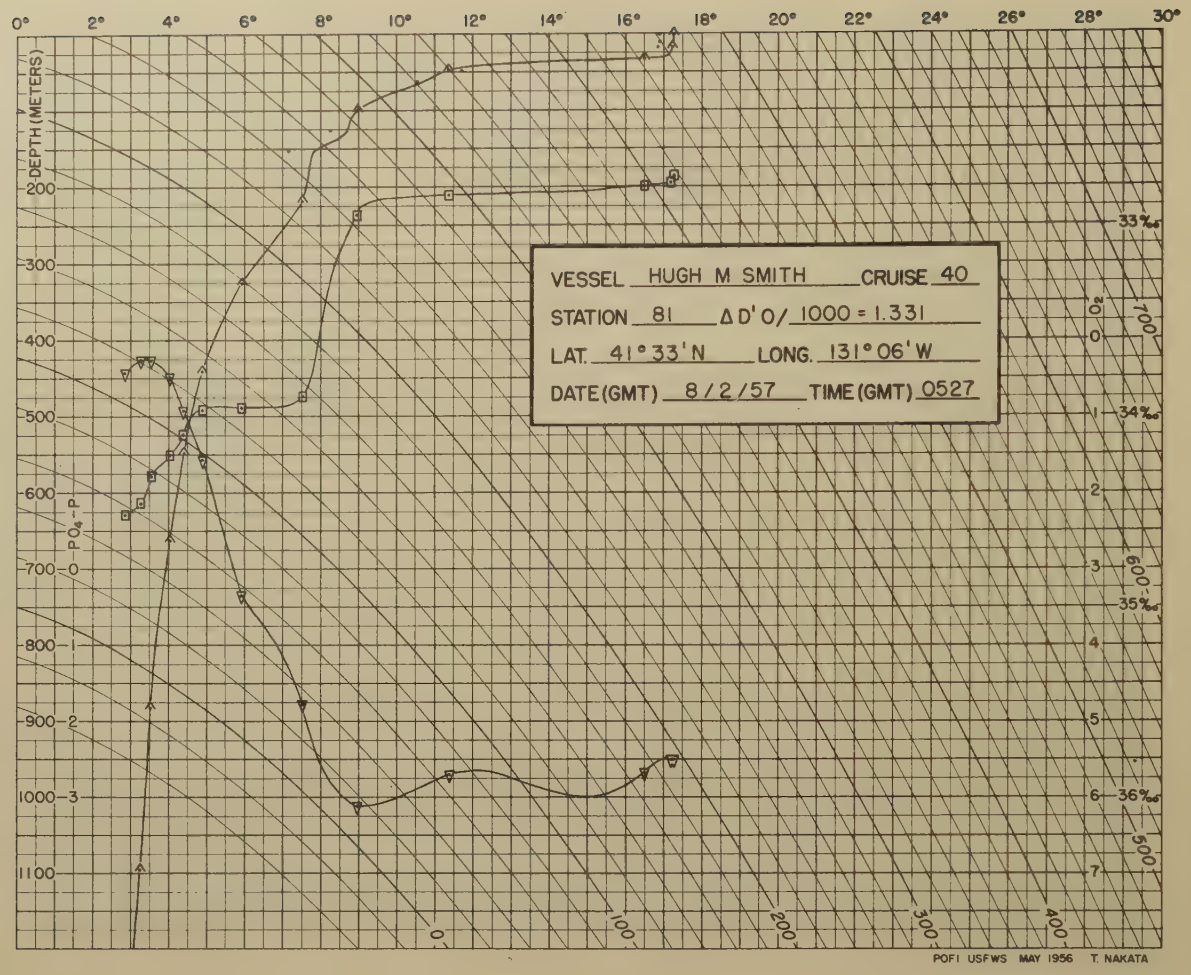
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 79 ΔD' O/ 1000 = 1.319
LAT. 42° 16' N LONG. 129° 05' W
DATE (GMT) 8 / 1 / 57 TIME (GMT) 0500
DEPTH (METERS)
PO4 - P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 5. Wind: 000°, 17 kt. Sea: 1-3 ft. Wire angle: 10°, 15°. BT slide: 238. Dry bulb: 62.5°F. Wet bulb: 61.0°F. Barometric pressure: 1026 mb.

| | Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 16.97 | 32.86 | 401.1 | 5.61 | 0.69 |
| | 10 | 17.00 | 32.77 | 408.3 | 5.56 | 0.62 |
| I | 31 | 16.54 | 32.77 | 398.3 | 5.58 | 0.49 |
| II | 51 | 10.12 | 32.77 | 276.3 | 6.96 | 0.87 |
| | 102 | 8.15 | 32.90 | 237.3 | 5.99 | 1.22 |
| | 225 | 7.04 | 33.89 | 148.6 | 2.95 | 2.21 |
| | 341 | 5.56 | 33.98 | 123.5 | 2.20 | 2.78 |
| | 462 | 5.14 | 34.09 | 110.5 | 1.23 | 3.08 |
| | 578 | 4.56 | 34.16 | 99.2 | 0.66 | 2.80 |
| | 693 | 4.16 | 34.23 | 89.7 | 0.40 | 2.81 |
| | 919 | 3.66 | 34.40 | 72.1 | 0.27 | 3.37 |
| | 1141 | 3.22 | 34.47 | 62.9 | 0.32 | 3.28 |
| | 1353 | 2.92 | 34.58 | 52.0 | 0.50 | 1.40* |
| | 1353 | | | | | 1.65* |

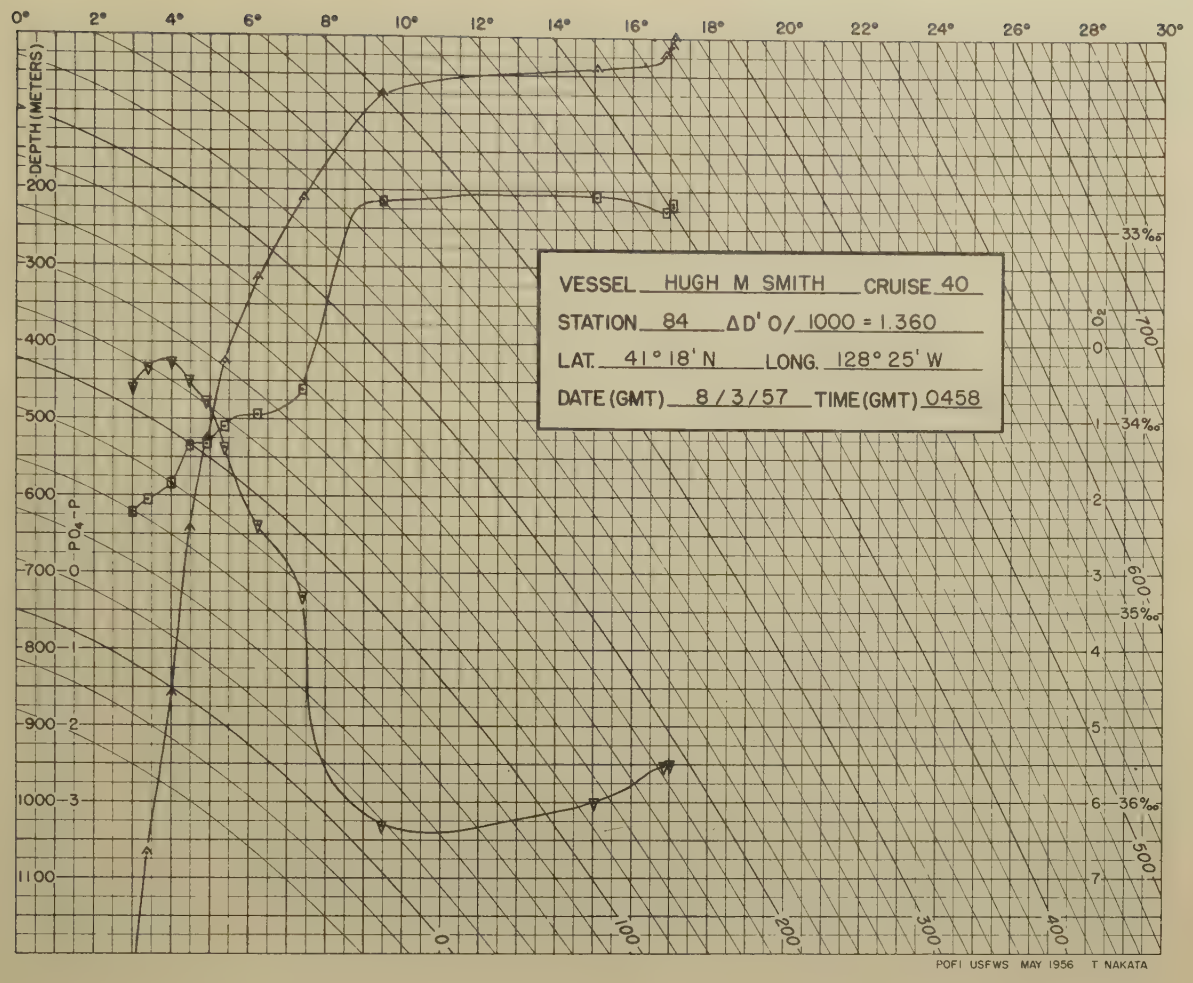
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 81 Δ D' O/ 1000 = 1.331
LAT. 41° 33' N LONG. 131° 06' W
DATE (GMT) 8/2/57 TIME (GMT) 0527
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 5. Wind: 330°, 10 kt. Sea: 1-3 ft. Wire angle: 00°.
BT slide: 247. Dry bulb: 62.8°F. Wet bulb: 60.2°F. Barometric pressure: 1028 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.25 | 32.74 | 416.4 | 5.51 | 0.57 |
| 15 | 17.20 | 32.77 | 413.0 | 5.50 | 0.57 |
| 31 | 16.48 | 32.79 | 395.7 | 5.68 | 1.76 |
| 47 | 11.36 | 32.84 | 291.5 | 5.69 | 0.71 |
| 100 | 8.95 | 32.94 | 245.7 | 6.11 | 1.07 |
| 217 | 7.54 | 33.89 | 155.1 | 4.77 | 1.64 |
| 325 | 5.93 | 33.95 | 130.0 | 3.34 | 2.13 |
| 440 | 4.88 | 33.96 | 117.6 | 1.57 | 1.96 |
| 548 | 4.40 | 34.09 | 102.7 | 0.92 | 1.72 |
| 661 | 4.04 | 34.20 | 90.9 | 0.48 | 3.16 |
| 882 | 3.54 | 34.31 | 77.9 | 0.26 | 3.08 |
| 1095 | 3.24 | 34.45 | 64.6 | 0.26 | 1.82 |
| 1309 | 2.85 | 34.52 | 56.0 | 0.42 | 2.53* |
| 1309 | | | | | 2.93* |

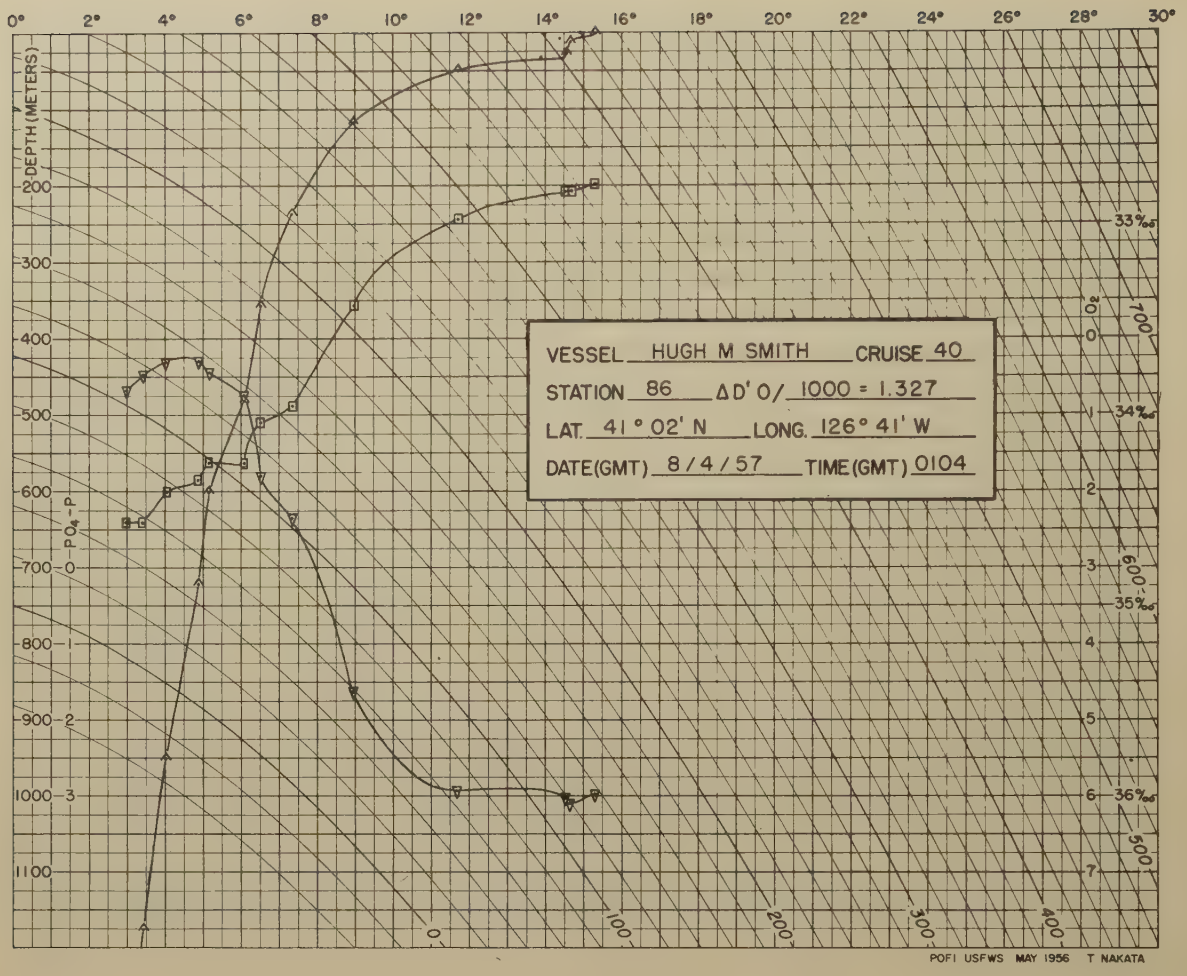
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 84 ΔD' O/ 1000 = 1.360
LAT. 41° 18' N LONG. 128° 25' W
DATE (GMT) 8/3/57 TIME (GMT) 0458
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 8. Wind: 280°, 12 kt. Sea: < 1 ft. Wire angle: 13°.
BT slide: 256. Dry bulb: 62.8°F. Wet bulb: 61.3°F. Barometric pressure: 1021 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.06 | 32.86 | 403.4 | 5.49 | 0.55 |
| 10 | 17.04 | 32.88 | 401.4 | 5.49 | 0.55 |
| 21 | 16.88 | 32.90 | 396.3 | 5.51 | 0.58 |
| 40 | 15.03 | 32.83 | 361.8 | 6.00 | 0.62 |
| 76 | 9.48 | 32.86 | 259.5 | 6.30 | 0.93 |
| 212 | 7.41 | 33.84 | 157.1 | 3.30 | 1.90 |
| 317 | 6.26 | 33.98 | 131.9 | 2.38 | 1.57 |
| 427 | 5.39 | 34.04 | 117.0 | 1.37 | 1.77 |
| 533 | 4.92 | 34.11 | 106.6 | 0.77 | 1.76 |
| 644 | 4.47 | 34.14 | 99.6 | 0.49 | 2.35 |
| 860 | 4.00 | 34.34 | 79.9 | 0.26 | 2.48 |
| 1068 | 3.40 | 34.42 | 68.3 | 0.34 | 2.01 |
| 1278 | 3.00 | 34.49 | 59.4 | 0.58 | 2.13* |
| 1278 | | | | | 1.80* |

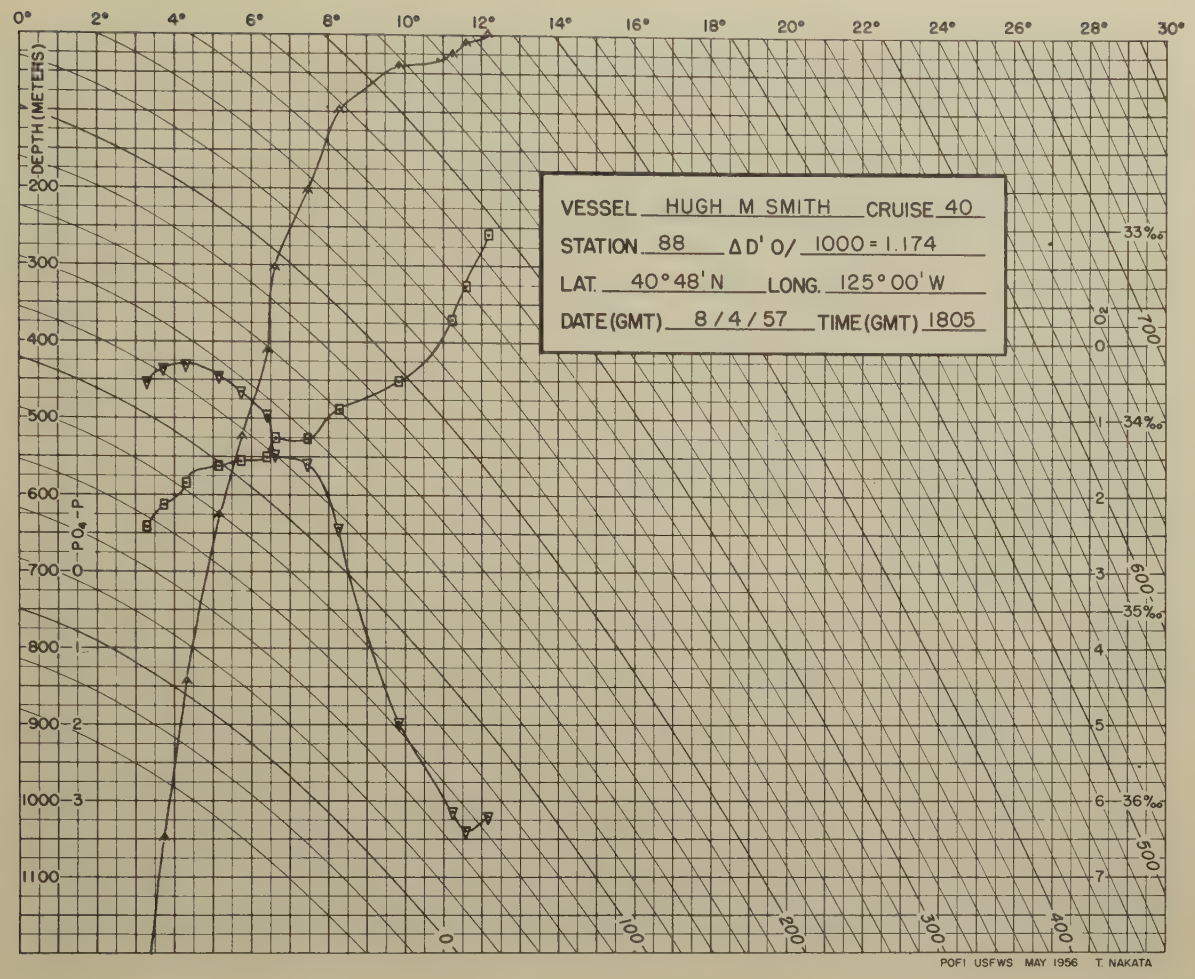
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 86 ΔD' O/ 1000 = 1.327
LAT. 41° 02' N LONG. 126° 41' W
DATE(GMT) 8/4/57 TIME(GMT) 0104
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 6. Wind: 240°, 10 kt. Sea: 3-5 ft. Wire angle: 03°.
BT slide: 262. Dry bulb: 63.5°F. Wet bulb: 62.9°F. Barometric pressure: 1015 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.28 | 32.79 | 370.0 | 5.98 | 0.60 |
| 11 | 14.66 | 32.83 | 354.2 | 6.08 | 0.60 |
| 27 | 14.55 | 32.83 | 352.0 | 6.02 | 0.64 |
| 48 | 11.71 | 32.97 | 288.1 | 5.93 | 0.99 |
| 117 | 8.95 | 33.42 | 210.0 | 4.63 | 1.75 |
| 236 | 7.36 | 33.95 | 148.0 | 2.34 | 2.52 |
| 356 | 6.54 | 34.04 | 130.8 | 1.79 | 2.64 |
| 481 | 6.08 | 34.25 | 109.3 | 0.74 | 3.20 |
| 601 | 5.18 | 34.25 | 98.8 | 0.43 | 1.68 |
| 721 | 4.89 | 34.34 | 88.9 | 0.29 | 3.05 |
| 952 | 4.04 | 34.40 | 75.8 | 0.30 | 3.50 |
| 1177 | 3.42 | 34.56 | 58.0 | 0.47 | 2.53 |
| 1386 | 2.99 | 34.56 | 53.9 | 0.66 | 2.38* |
| 1386 | | | | | 1.83* |

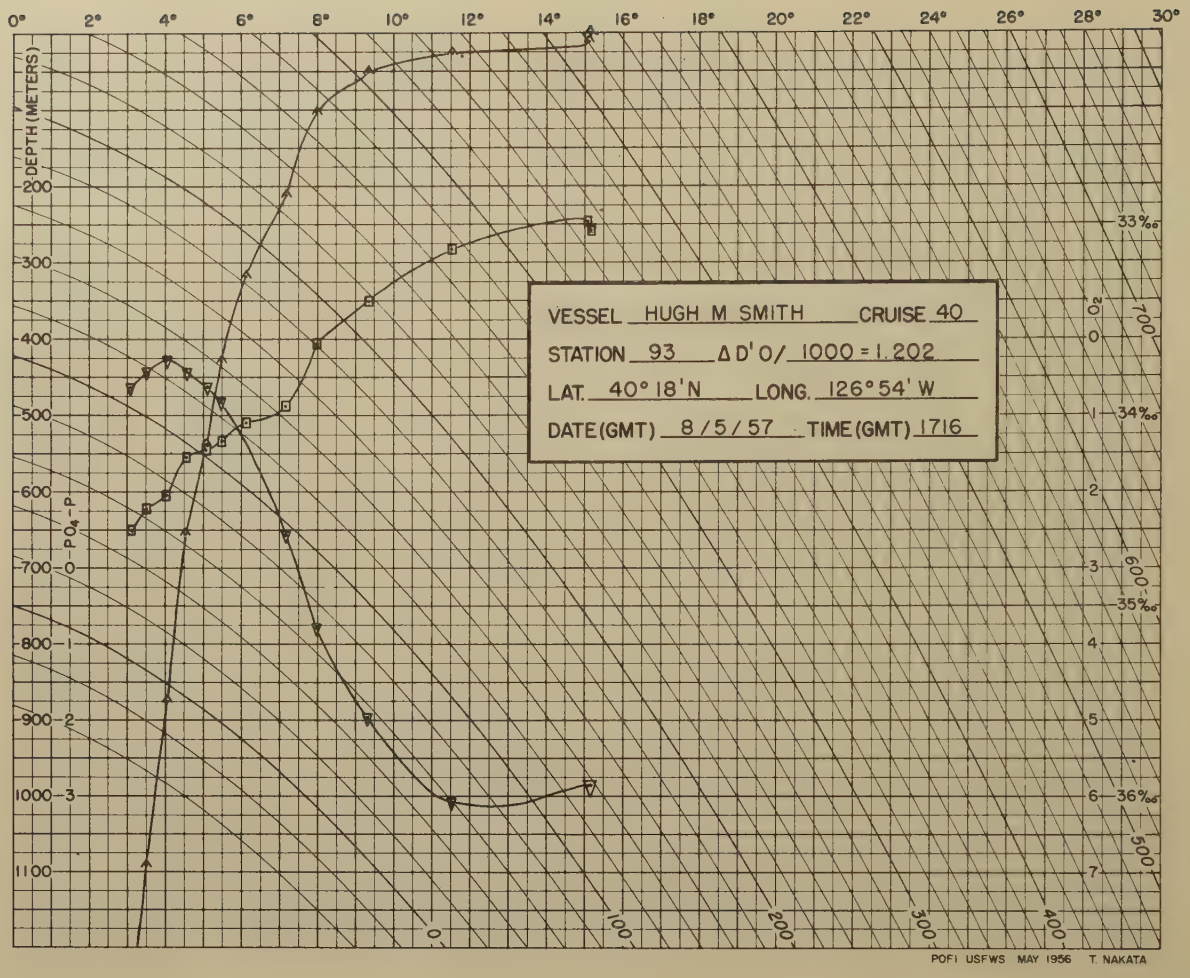
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried


VESSEL HUGH M SMITH CRUISE 40
STATION 88 ΔD' O/ 1000 = 1.174
LAT. 40°48' N LONG. 125°00' W
DATE (GMT) 8/4/57 TIME (GMT) 1805
DEPTH (METERS)
PO4-P
POF1 USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 6. Wind: 160°, 13 kt. Sea: 1-3 ft. Wire angle: 17°.
BT slide: 268. Dry bulb: 60.8°F. Wet bulb: 57.3°F. Barometric pressure: 1014 mb.

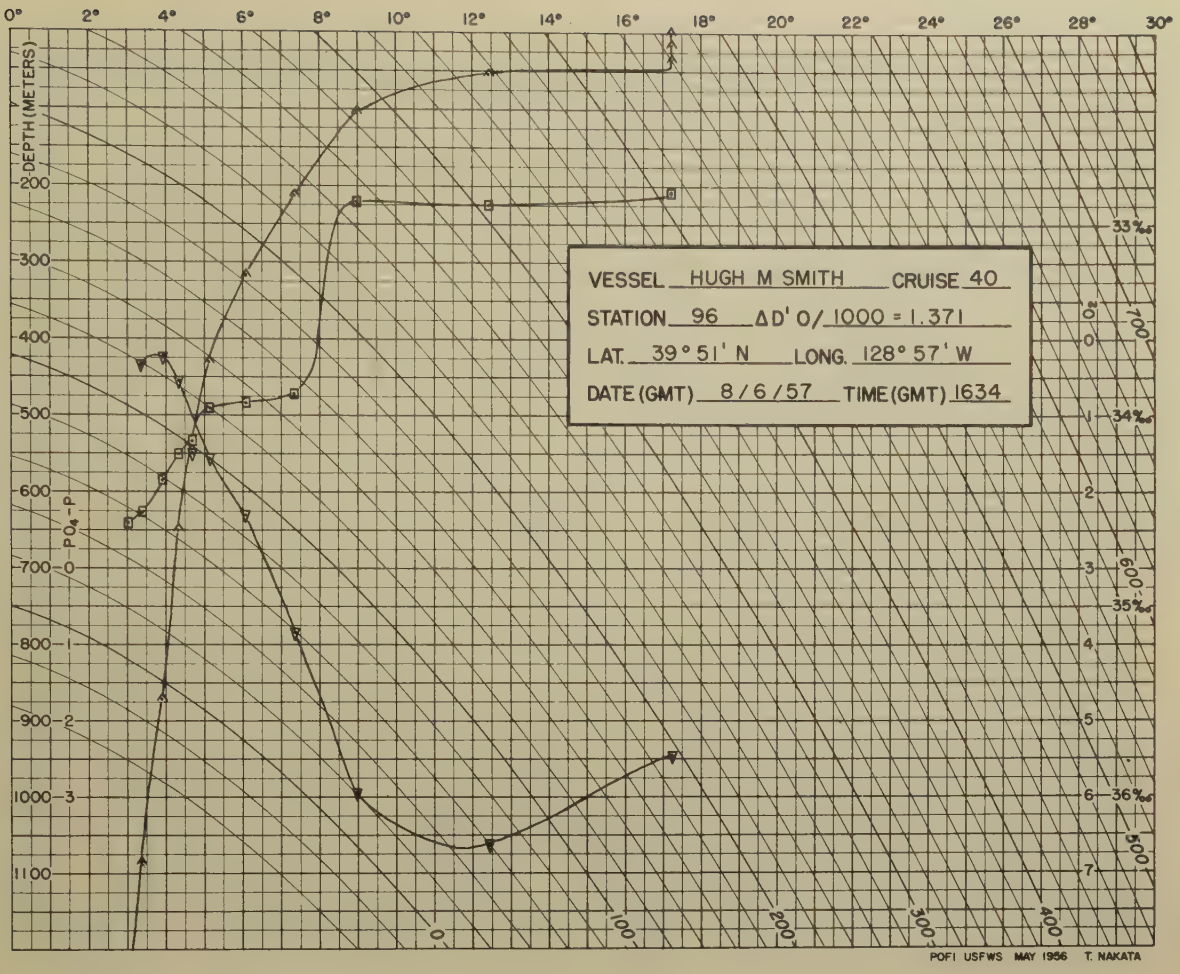
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 12.18 | 33.04 | 291.2 | 6.21 | 0.86 |
| 10 | 11.59 | 33.30 | 261.9 | 6.39 | 0.96 |
| 25 | 11.25 | 33.48 | 242.4 | 6.15 | 1.22 |
| 40 | 9.84 | 33.80 | 195.9 | 4.95 | 1.58 |
| 99 | 8.28 | 33.95 | 160.9 | 2.42 | 2.13 |
| 204 | 7.46 | 34.11 | 137.5 | 1.58 | 2.35 |
| 305 | 6.63 | 34.11 | 126.7 | 1.47 | 2.45 |
| 412 | 6.43 | 34.20 | 117.4 | 0.95 | 2.61 |
| 527 | 5.75 | 34.23 | 106.9 | 0.63 | 1.68 |
| 628 | 5.16 | 34.25 | 98.7 | 0.43 | 1.92 |
| 844 | 4.30 | 34.34 | 82.9 | 0.29 | 2.98 |
| 1051 | 3.72 | 34.45 | 69.0 | 0.34 | 2.96 |
| 1262 | 3.28 | 34.56 | 56.7 | 0.52 | 2.72* |
| 1262 | | | | | 2.37* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 93 Δ D' O/ 1000 = 1.202
LAT. 40° 18' N LONG. 126° 54' W
DATE (GMT) 8/5/57 TIME (GMT) 1716
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 5. Wind: 300°, 11 kt. Sea: 1-3 ft. Wire angle: 09°.
BT slide: 277. Dry bulb: 60.9°F. Wet bulb: 59.6°F. Barometric pressure: 1017 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 15.16 | 33.03 | 349.9 | 5.84 | 0.67 |
| 10 | 15.09 | 32.99 | 351.2 | 5.85 | 0.68 |
| 26 | 11.54 | 33.13 | 273.3 | 6.08 | 0.82 |
| 52 | 9.34 | 33.40 | 217.6 | 4.97 | 1.55 |
| 103 | 7.98 | 33.62 | 181.2 | 3.78 | 1.78 |
| 212 | 7.18 | 33.95 | 145.9 | 2.54 | 2.12 |
| 318 | 6.14 | 34.04 | 125.7 | NS | 2.42 |
| 430 | 5.49 | 34.14 | 110.8 | 0.80 | 1.91 |
| 540 | 5.08 | 34.18 | 103.0 | 0.62 | 1.42 |
| 654 | 4.57 | 34.22 | 94.7 | 0.43 | 2.83 |
| 876 | 4.04 | 34.42 | 74.3 | 0.27 | 2.95 |
| 1091 | 3.48 | 34.49 | 63.7 | 0.43 | 1.48 |
| 1307 | 3.10 | 34.60 | 52.0 | 0.62 | 2.12 |

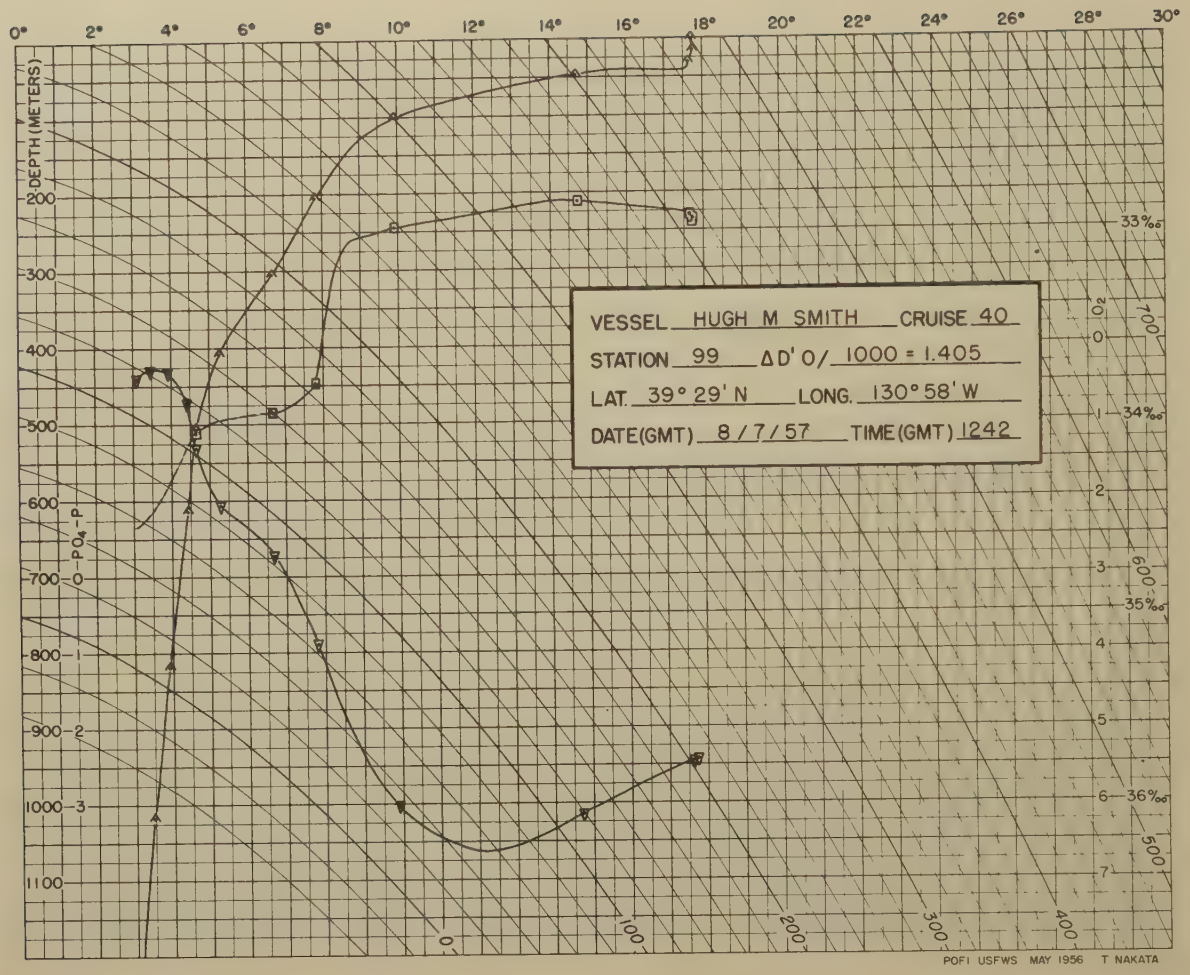

VESSEL HUGH M SMITH CRUISE 40
STATION 96 ΔD' O/ 1000 = 1.371
LAT. 39° 51' N LONG. 128° 57' W
DATE (GMT) 8/6/57 TIME (GMT) 1634
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 01, cloud coverage 7. Wind: 270°, 06 kt. Sea: 1-3 ft. Wire angle: 10°.
BT slide: 285. Dry bulb: 63.8°F. Wet bulb: 62.7°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.20 | 32.84 | 408.0 | 5.47 | 0.56 |
| 15 | 17.20 | 32.83 | 408.8 | 5.47 | 0.54 |
| 36 | 17.20 | 32.84 | 408.0 | 5.47 | 0.55 |
| 53 | 12.42 | 32.90 | 306.0 | 6.61 | 0.61 |
| 104 | 8.97 | 32.88 | 250.5 | 5.96 | 0.98 |
| 213 | 7.34 | 33.89 | 152.4 | 3.85 | 1.83 |
| 318 | 6.05 | 33.93 | 133.0 | 2.30 | 2.33 |
| 431 | 5.14 | 33.96 | 120.2 | 1.57 | 2.60 |
| 538 | 4.67 | 34.14 | 101.6 | 1.50 | 1.80 |
| 650 | 4.34 | 34.20 | 93.8 | 0.54 | 1.35 |
| 872 | 3.88 | 34.34 | 78.7 | 0.23 | 1.79 |
| 1086 | 3.36 | 34.51 | 61.2 | 0.32 | 1.91 |
| 1305 | 2.99 | 34.56 | 53.9 | * | 2.92 ** |
| 1305 | | | | | 2.82 ** |

* One $O_2$ sample missing; possibly the last.

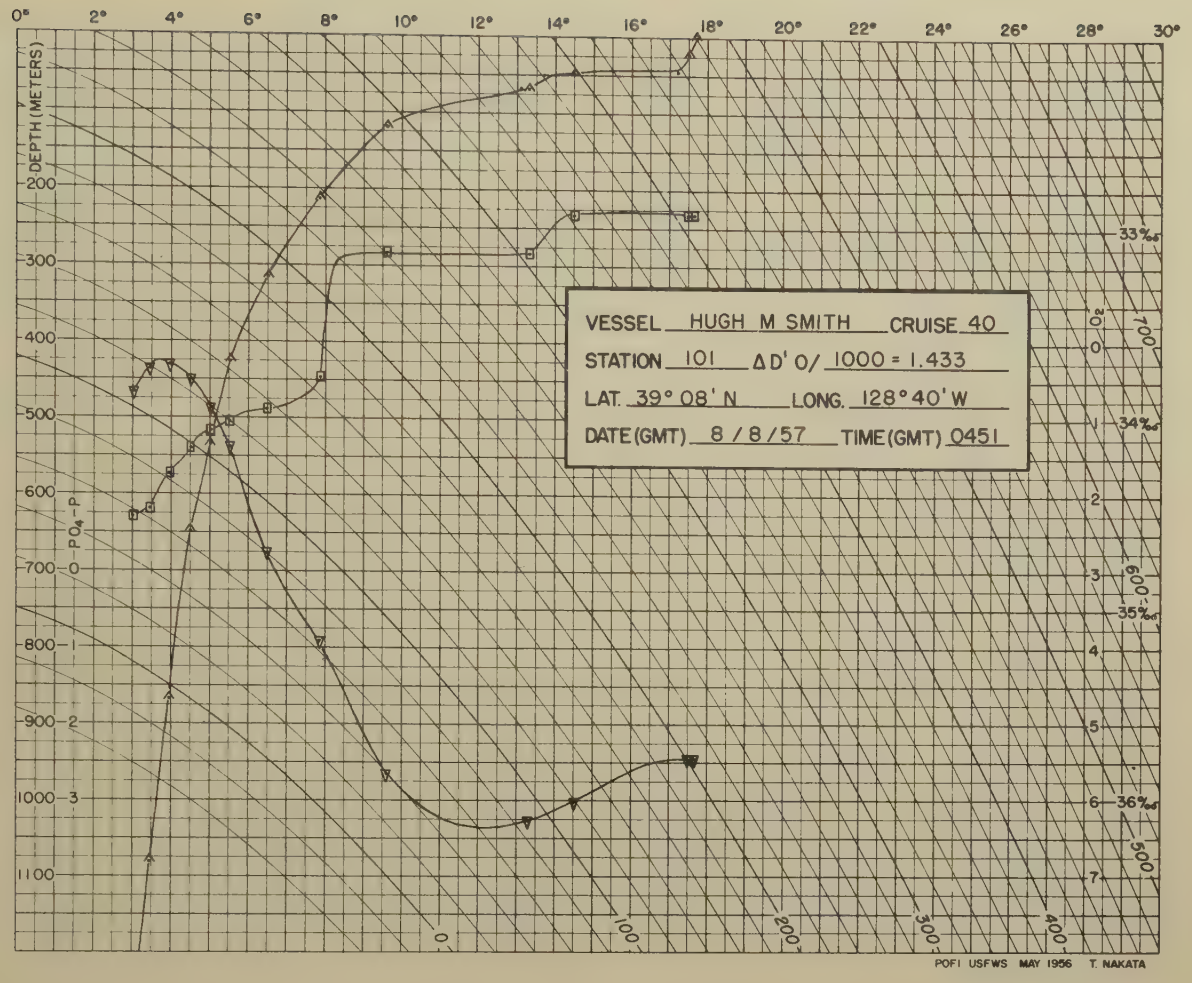
** Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 99 ΔD' O/ 1000 = 1.405
LAT. 39° 29' N LONG. 130° 58' W
DATE(GMT) 8/7/57 TIME(GMT) 1242
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 00, cloud coverage not recorded. Wind: 300°, 14 kt. Sea: 3-5 ft. Wire angle: 18°. BT slide: 294. Dry bulb: 62.6°F. Wet bulb: 60.2°F. Barometric pressure: 1019 mb.

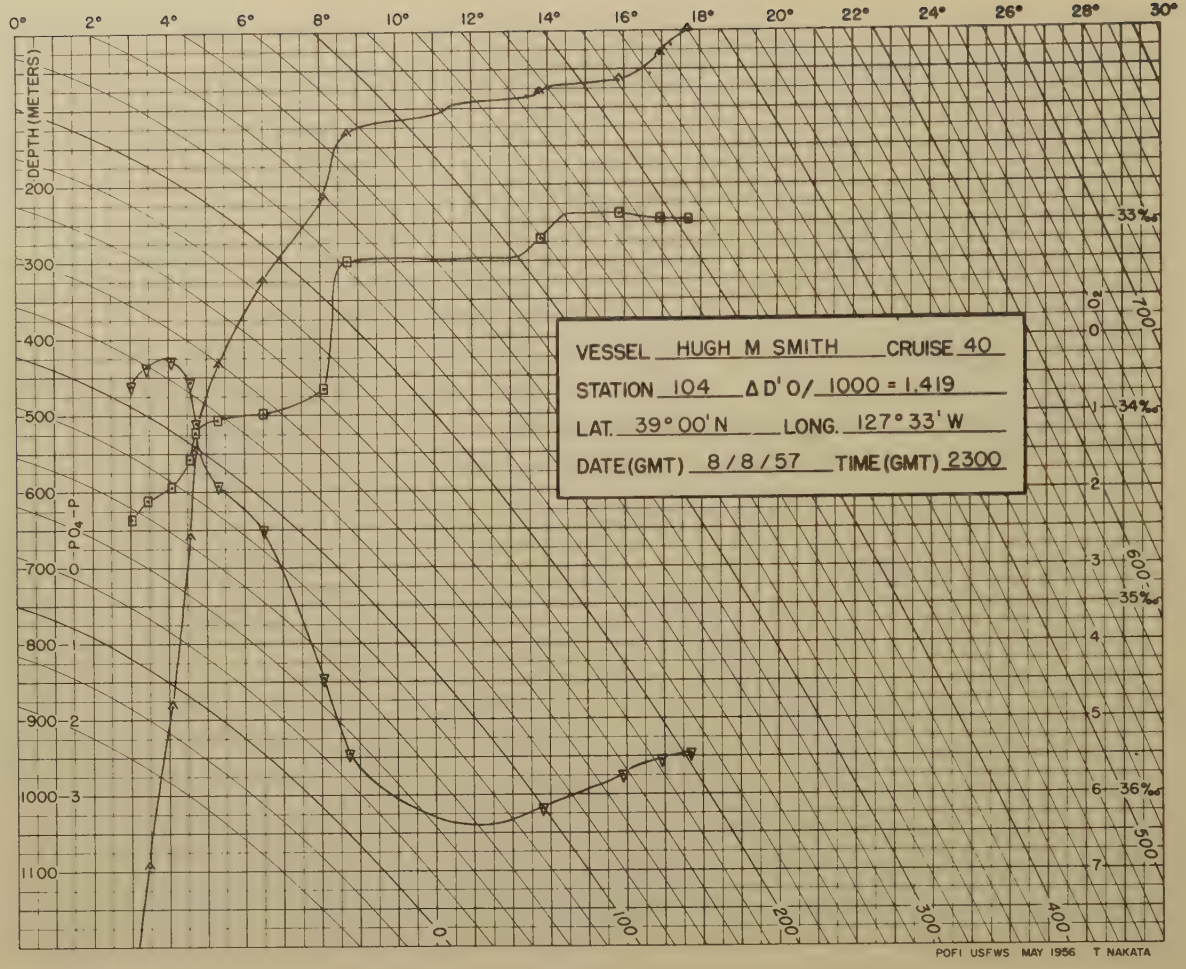
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.72 | 32.95 | 411.9 | 5.42 | 0.45 |
| 15 | 17.74 | 32.94 | 413.0 | 5.41 | 0.46 |
| 30 | 17.66 | 32.92 | 412.5 | 5.43 | 0.50 |
| 45 | 14.70 | 32.84 Q | 354.3 | 6.14 | 0.50 |
| 100 | 9.91 | 32.97 | 258.1 | 6.01 | 0.69 |
| 204 | 7.82 | 33.78 | 167.2 | 3.87 | 1.64 |
| 303 | 6.68 | 33.93 | 140.8 | 2.72 | 2.01 |
| 408 | 5.27 | NS | - | 2.06 | 2.28 |
| 507 | 4.66 | 34.04 | 109.1 | 1.30 | 1.81 |
| 613 | 4.42 | NS | - | 0.70 | 2.83 |
| 817 | 3.90 | NS | - | 0.31 | 2.87 |
| 1016 | 3.45 | NS | - | 0.28 | 2.87 |
| 1223 | 3.10 | NS | - | 0.38 | 2.75* |
| 1223 | | | | | 2.83* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 101 ΔD' O/ 1000 = 1.433
LAT. 39° 08' N LONG. 128° 40' W
DATE (GMT) 8 / 8 / 57 TIME (GMT) 0451
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

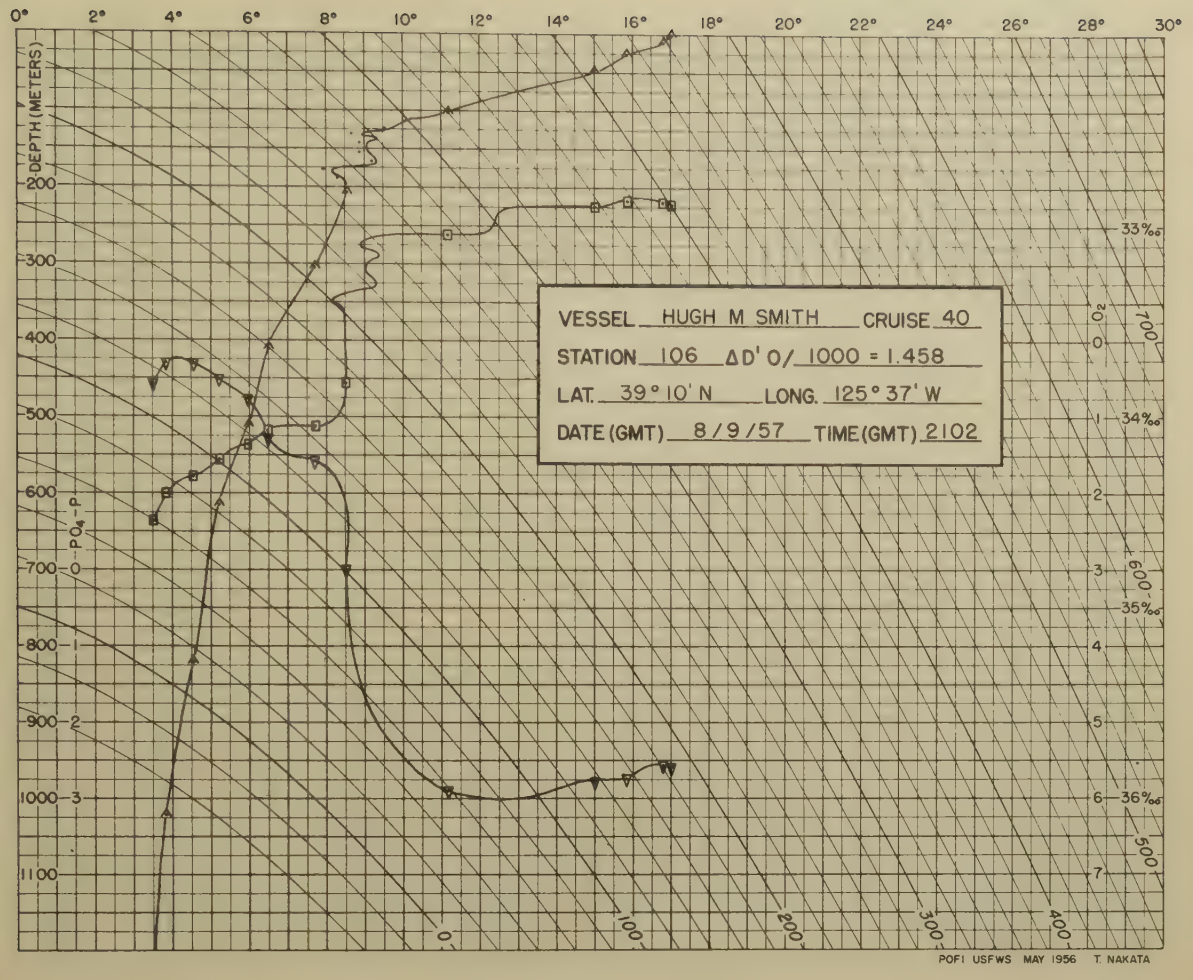
Weather: 02, cloud coverage not recorded. Wind: 310°, 14 kt. Sea: 1-3 ft. Wire angle: 09°. BT slide: 300. Dry bulb: 64.3°F. Wet bulb: 62.5°F. Barometric pressure: 1020 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | O2, ml./L. | PO4-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.67 | 32.92 | 412.7 | 5.43 | 0.57 |
| 20 | 17.50 | 32.92 | 409.0 | 5.43 | 0.46 |
| 46 | 14.51 | 32.92 | 344.7 | 6.02 | 0.51 |
| 67 | 13.30 | 33.13 | 305.4 | 6.25 | 0.51 |
| 118 | 9.60 | 33.13 | 241.3 | 5.65 | 1.08 |
| 212 | 7.85 | 33.78 | 167.5 | 3.89 | 1.93 |
| 316 | 6.50 | 33.95 | 137.1 | 2.74 | 2.40 |
| 427 | 5.53 | 34.02 | 120.3 | 1.35 | 2.92 |
| 534 | 5.02 | 34.07 | 110.6 | 0.85 | 2.93 |
| 647 | 4.52 | 34.16 | 98.7 | 0.49 | 3.47 |
| 867 | 3.93 | 34.29 | 83.0 | 0.31 | 3.57 |
| 1080 | 3.44 | 34.47 | 64.9 | 0.36 | 3.44 |
| 1297 | 3.03 | 34.51 | 58.1 | 0.67 | 3.31 |


VESSEL HUGH M SMITH CRUISE 40
STATION 104 Δ D' O/ 1000 = 1.419
LAT. 39° 00' N LONG. 127° 33' W
DATE (GMT) 8/8/57 TIME (GMT) 2300
DEPTH (METERS)
POFI USFWS MAY 1956 T NAKATA

Weather: 01, cloud coverage 6. Wind: 310°, 06 kt. Sea: 1-3 ft. Wire angle: 08°.
BT slide: 307. Dry bulb: 67.0°F. Wet bulb: 59.3°F. Barometric pressure: 1021 mb.

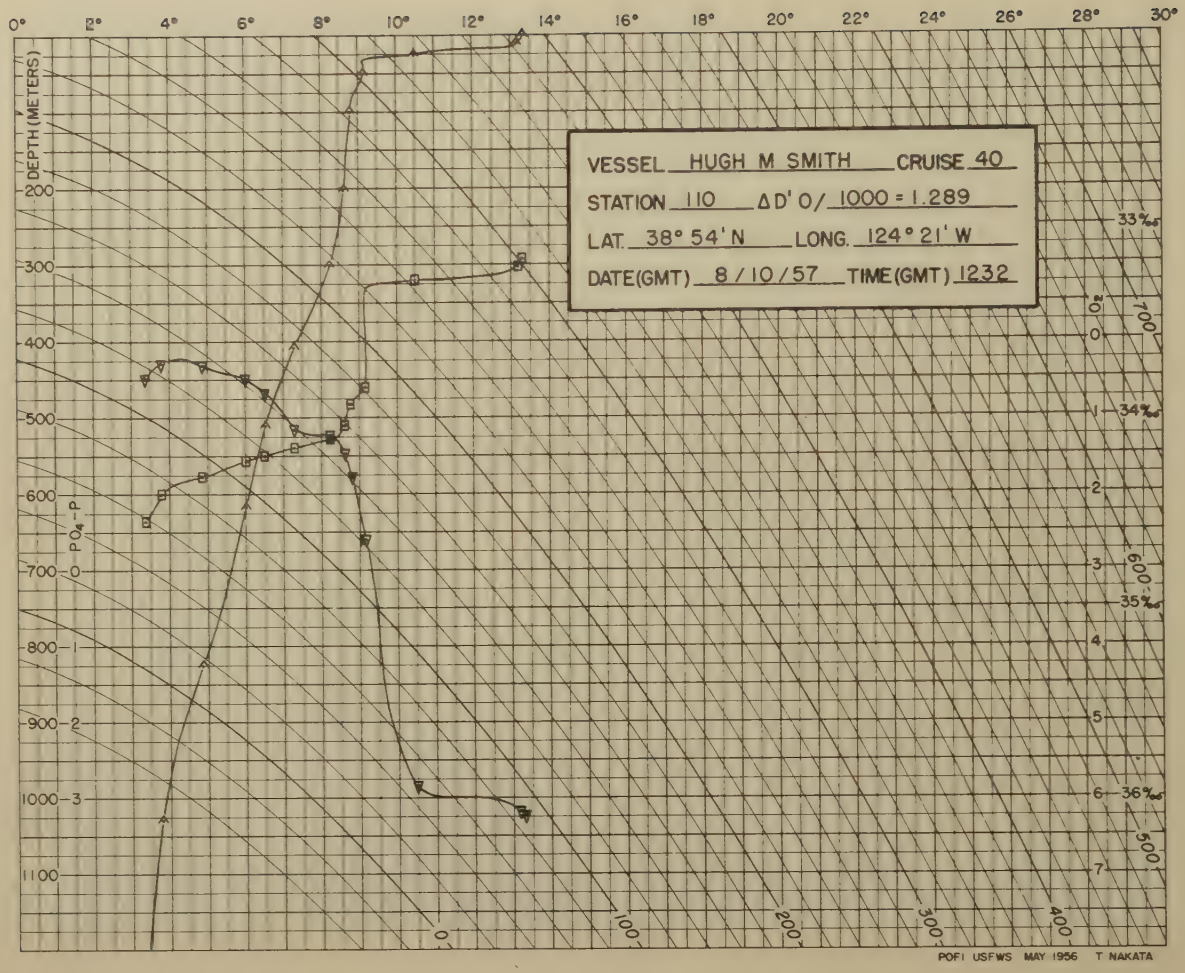
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.67 | 32.99 | 407.5 | 5.47 | NS |
| 31 | 16.94 | 32.98 | 391.9 | 5.54 | 0.52 |
| 63 | 15.86 | 32.95 | 370.2 | 5.74 | 0.57 |
| 79 | 13.78 | 33.08 | 318.3 | 6.18 | 0.60 |
| 131 | 8.73 | 33.19 | 224.0 | 5.46 | 1.40 |
| 216 | 8.06 | 33.86 | 164.6 | 4.45 | 1.82 |
| 323 | 6.52 | 33.99 | 134.3 | 2.51 | 2.64 |
| 437 | 5.31 | 34.02 | 117.7 | 1.92 | 2.78 |
| 547 | 4.74 | 34.09 | 106.2 | 1.10 | 3.06 |
| 660 | 4.58 | 34.23 | 94.0 | 0.55 | 3.55 |
| 882 | 4.06 | 34.38 | 77.5 | 0.29 | 3.54 |
| 1094 | 3.42 | 34.45 | 66.2 | 0.37 | 3.60 |
| 1305 | 3.03 | 34.54 | 55.9 | 0.60 | 3.56 |


VESSEL HUGH M SMITH CRUISE 40
STATION 106 ΔD' O/ 1000 = 1.458
LAT. 39° 10' N LONG. 125° 37' W
DATE (GMT) 8/9/57 TIME (GMT) 2102
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 01, cloud coverage 6. Wind: 340°, 08 kt. Sea: 1-3 ft. Wire angle: 18°.
BT slide: 314. Dry bulb: 64.0°F. Wet bulb: 60.0°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 17.02 | 32.88 | 400.9 | 5.58 | 0.56 |
| 10 | 16.80 | 32.87 | 396.2 | 5.57 | 0.61 |
| 25 | 15.84 | 32.86 | 374.5 | 5.73 | 0.51 |
| 50 | 15.02 | 32.89 | 357.1 | 5.74 | 0.70 |
| 100 | 11.18 | 33.04 | 273.7 | 5.89 | 1.00 |
| 205 | 8.54 | 33.82 | 174.4 | 2.98 | 2.23 |
| 304 | 7.68 | 34.05 | 145.1 | 1.55 | 2.79 |
| 409 | 6.50 | 34.07 | 128.0 | 1.27 | 2.97 |
| 509 | 5.96 | 34.14 | 116.1 | 0.75 | 3.04 |
| 614 | 5.22 | 34.22 | 101.6 | 0.51 | NG |
| 820 | 4.56 | 34.31 | 87.8 | 0.31 | 3.54 |
| 1020 | 3.84 | 34.40 | 73.9 | 0.29 | 3.54 |
| 1226 | 3.52 | 34.54 | 60.5 | 0.55 | 3.51* |
| 1226 | | | | | 3.46* |

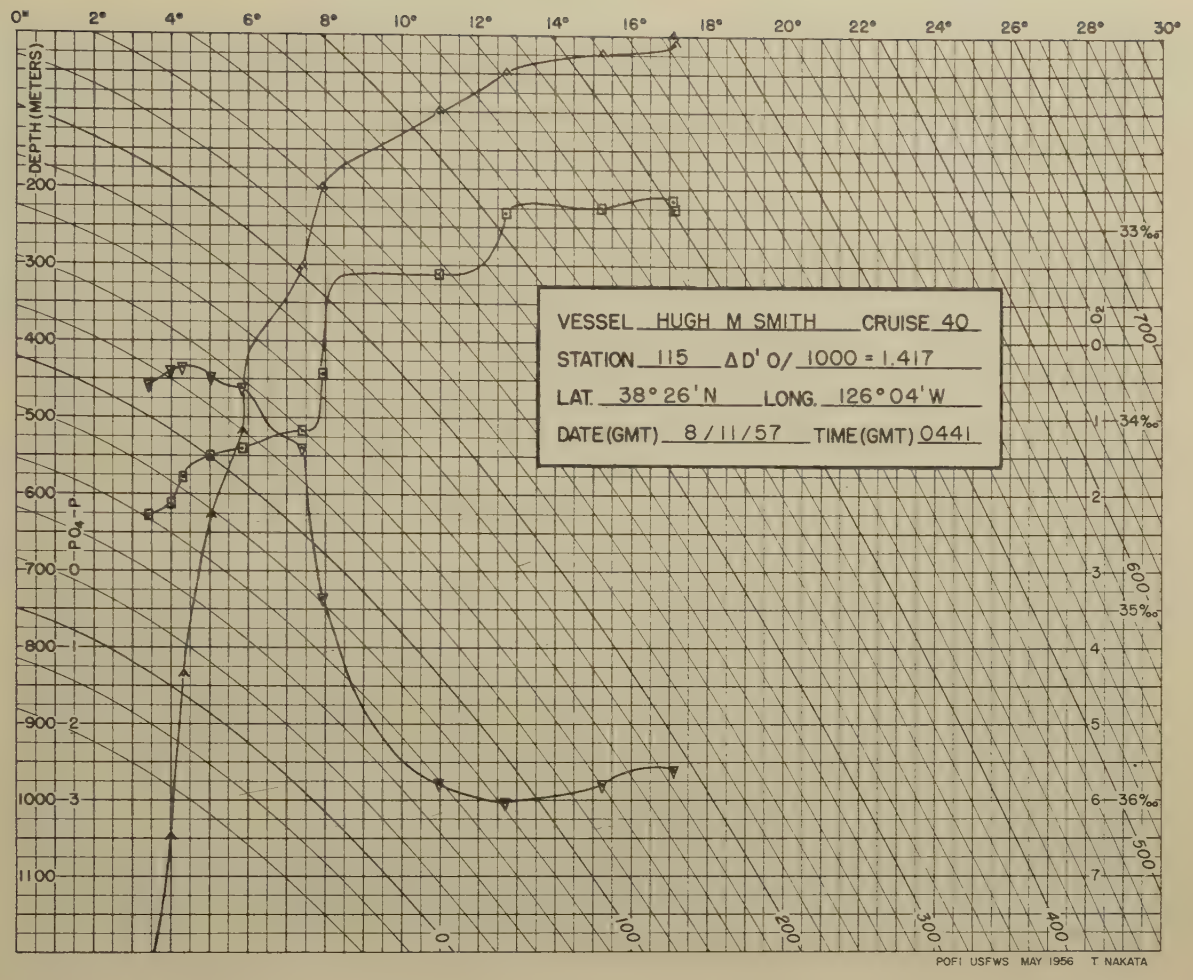
* Values of duplicate did not agree within 0.02 μg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 110 ΔD' O/ 1000 = 1.289
LAT. 38° 54' N LONG. 124° 21' W
DATE(GMT) 8/10/57 TIME(GMT) 1232
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 1. Wind: 330°, 18 kt. Sea: 3-5 ft. Wire angle: 24°.
BT slide: 318. Dry bulb: 58.9°F. Wet bulb: 57.1°F. Barometric pressure: 1015 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 13.33 | 33.17 | 303.1 | 6.22 | 1.17 |
| 10 | 13.18 | 33.21 | 297.3 | 6.18 | 1.09 |
| 24 | 10.48 | 33.28 | 244.2 | 5.84 | 1.36 |
| 49 | 9.16 | 33.84 | 182.1 | 2.61 | 2.65 |
| 98 | 8.80 | 33.93 | 170.0 | 1.78 | 2.12 |
| 202 | 8.62 | 34.04 | 159.3 | 1.47 | 2.55 |
| 301 | 8.24 | 34.11 | 148.5 | 1.24 | 2.74 |
| 408 | 7.30 | 34.16 | 131.6 | 1.16 | 2.76 |
| 510 | 6.54 | 34.20 | 118.9 | 0.68 | 2.11 |
| 617 | 6.01 | 34.23 | 110.0 | 0.49 | 3.53 |
| 825 | 4.87 | 34.31 | 90.8 | 0.31 | 3.50 |
| 1029 | 3.79 | 34.40 | 73.2 | 0.27 | 3.66 |
| 1237 | 3.38 | 34.54 | 59.0 | 0.47 | 3.44* |
| 1237 | | | | | 3.28* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.

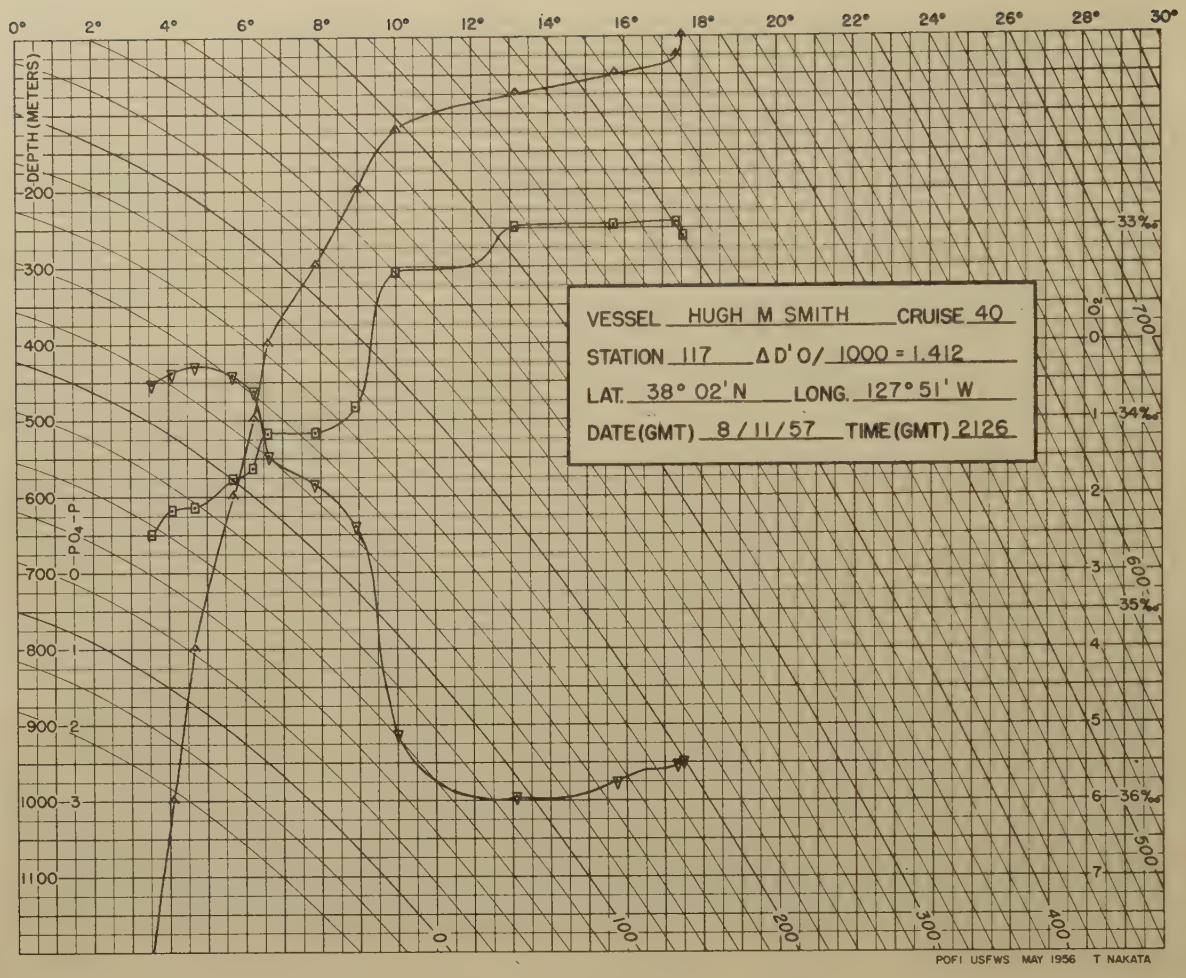

VESSEL HUGH M SMITH CRUISE 40
STATION 115 ΔD' O/ 1000 = 1.417
LAT. 38° 26' N LONG. 126° 04' W
DATE (GMT) 8/11/57 TIME (GMT) 0441
DEPTH (METERS)
PO4-P
POF1 USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 2. Wind: 330°, 22 kt. Sea: 3-5 ft. Wire angle: 27°.
BT slide: 326. Dry bulb: 62.8°F. Wet bulb: 59.2°F. Barometric pressure: 1018 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.10 | 32.86 | 404.2 | 5.60 | 0.56 |
| 9 | 17.12 | 32.90 | 402.0 | 5.62 | 0.54 |
| 23 | 15.23 | 32.89 | 361.6 | 5.80 | 0.74 |
| 50 | 12.72 | 32.97 | 306.4 | 6.03 | 1.02 |
| 100 | 10.95 | 33.25 | 254.2 | 5.78 | 1.31 |
| 201 | 7.94 | 33.77 | 169.5 | 3.34 | 2.27 |
| 305 | 7.40 | 34.07 | 139.8 | 1.40 | 2.67 |
| PT | - | - | - | - | - |
| 521 | 5.84 | 34.16 | 113.3 | 0.61 | 3.12* |
| 628 | 5.04 | 34.20 | 101.0 | 0.47 | 3.40 |
| 837 | 4.32 | 34.31 | 85.3 | 0.33 | 3.56 |
| 1049 | 3.98 | 34.45 | 71.3 | 0.39 | 3.91 |
| 1255 | 3.42 | 34.51 | 61.7 | 0.58 | 3.54** |
| 1255 | | | | | 3.39** |

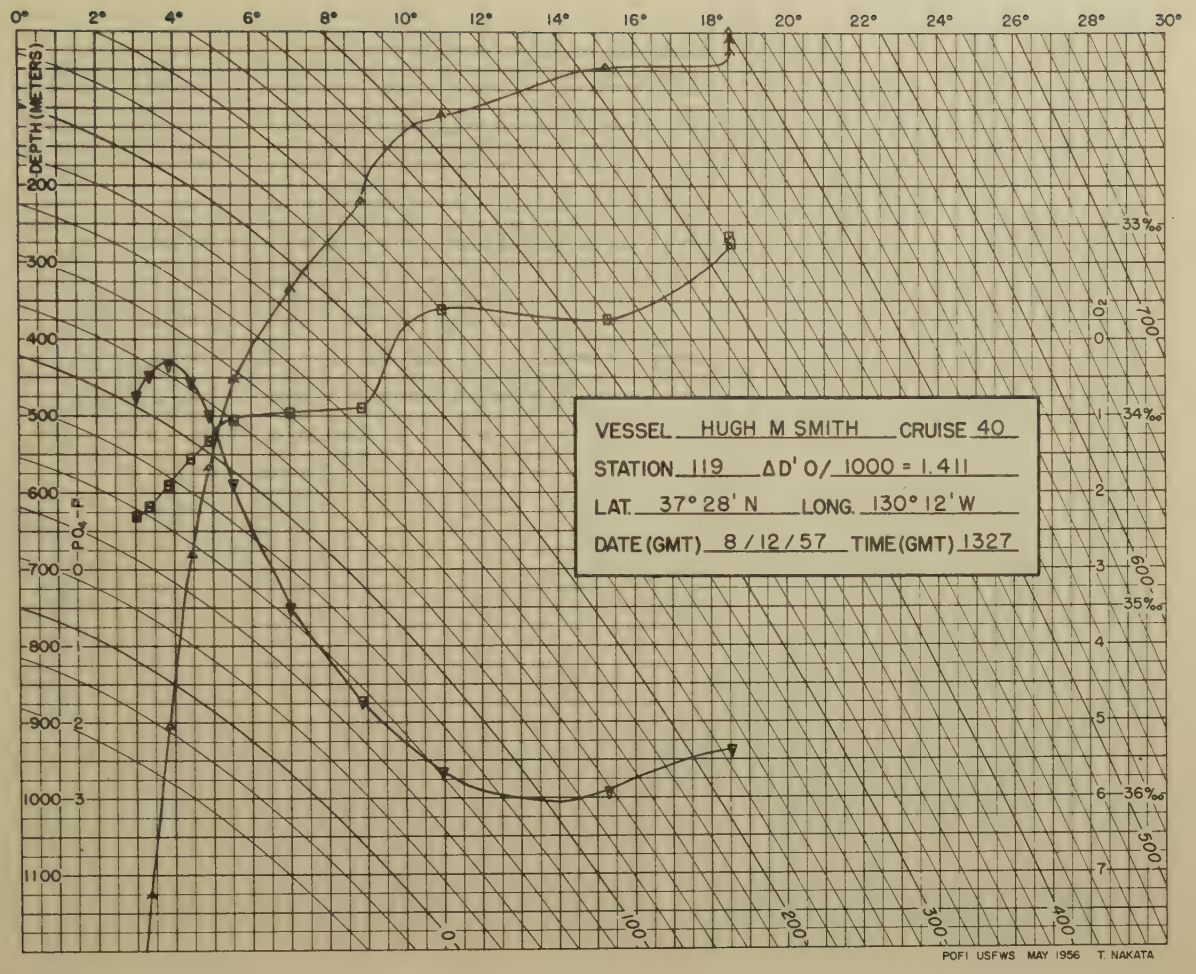
* Spilled part of sample.

** Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 117 Δ D' O/ 1000 = 1.412
LAT. 38° 02' N LONG. 127° 51' W
DATE (GMT) 8/11/57 TIME (GMT) 2126
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 01, cloud coverage 2. Wind: 330°, 14 kt. Sea: 1-3 ft. Wire angle: 22°.
BT slide: 333. Dry bulb: 64.7°F. Wet bulb: 60.8°F. Barometric pressure: 1021 mb.

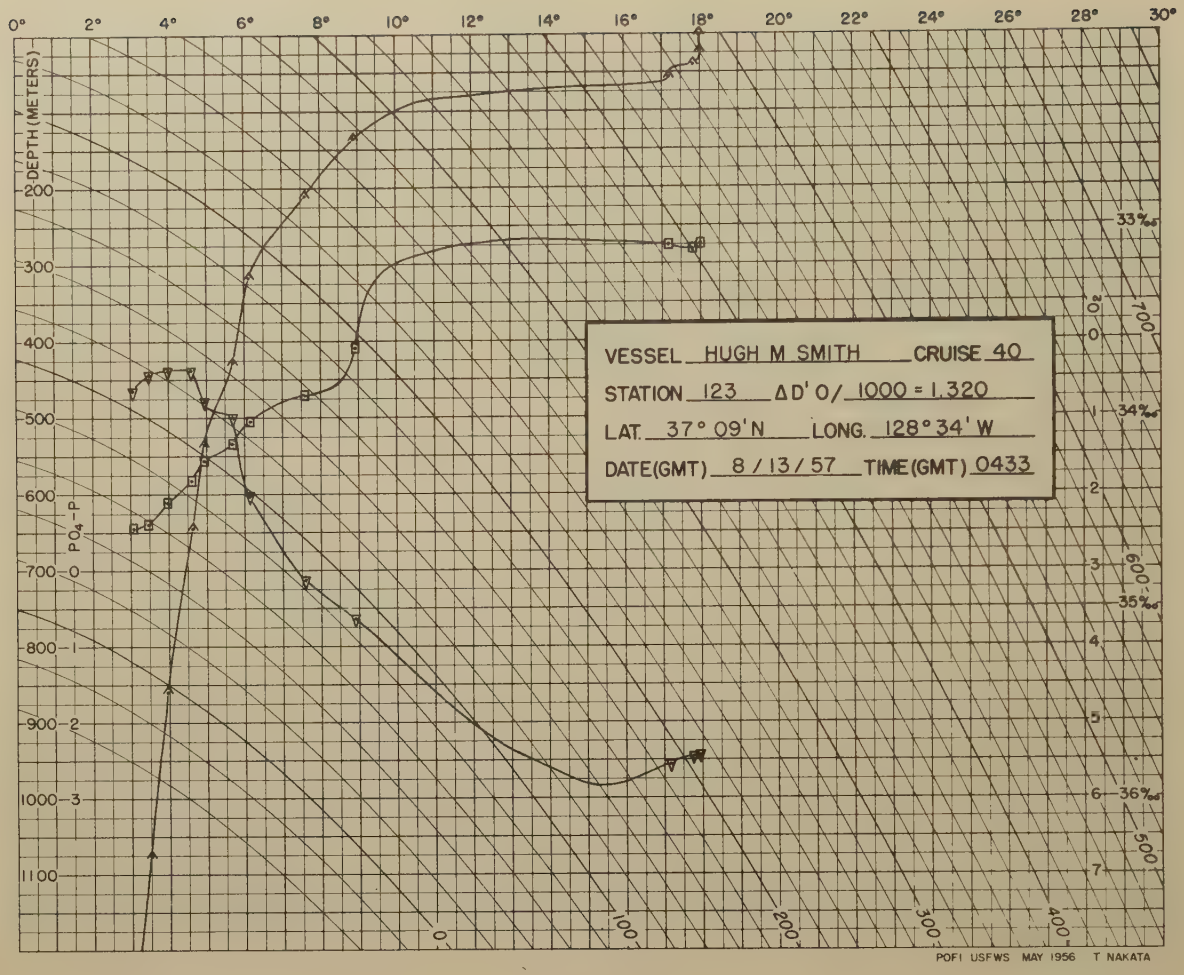
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.52 | 33.04 | 400.7 | 5.49 | 0.50 |
| 25 | 17.35 | 32.97 | 401.8 | 5.53 | 0.50 |
| 49 | 15.74 | 32.98 | 365.9 | 5.74 | 0.56 |
| 73 | 13.12 | 32.99 | 312.3 | 5.95 | 0.82 |
| 122 | 10.00 | 33.25 | 238.9 | 5.13 | 1.40 |
| 200 | 8.94 | 33.93 | 172.1 | 2.39 | 2.35 |
| 297 | 7.85 | 34.07 | 145.9 | 1.83 | 2.45 |
| 400 | 6.63 | 34.07 | 129.6 | 1.46 | 2.68 |
| 498 | 6.27 | 34.25 | 111.6 | 0.61 | 1.60 |
| 601 | 5.71 | 34.31 | 100.6 | 0.40 | 2.94 |
| 801 | 4.68 | 34.45 | 78.5 | 0.29 | 3.14 |
| 999 | 4.08 | 34.47 | 70.9 | 0.35 | 2.83 |
| 1204 | 3.56 | 34.60 | 56.2 | 0.51 | 2.42 |


VESSEL HUGH M SMITH CRUISE 40
STATION 119 ΔD' O/ 1000 = 1.411
LAT. 37° 28' N LONG. 130° 12' W
DATE (GMT) 8 / 12 / 57 TIME (GMT) 1327
DEPTH (METERS)
POF1 USFWS MAY 1956 T. NAKATA

Weather 02, cloud coverage 8. Wind: 320°, 11 kt. Sea: 1-3 ft. Wire angle: 17°.
BT slide: 342. Dry bulb: 64.7°F. Wet bulb: 59.2°F. Barometric pressure: 1023 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 18.51 | 33.06 | 422.1 | 5.37 | NS |
| 10 | 18.54 | 33.10 | 420.0 | 5.37 | 0.41 |
| 25 | 18.55 | 33.10 | 420.1 | 5.36 | 0.51 |
| 45 | 15.27 | 33.49 | 318.7 | 5.92 | 0.47 |
| 111 | 10.96 | 33.44 | 240.3 | 5.66 | 0.62 |
| 222 | 8.86 | 33.95 | 169.4 | 4.72 | 1.38 |
| 335 | 7.01 | 33.98 | 141.4 | 3.50 | 1.59 |
| 454 | 5.56 | 34.02 | 120.5 | 1.88 | 1.87 |
| 569 | 4.90 | 34.13 | 104.9 | 0.99 | 1.75 |
| 683 | 4.44 | 34.22 | 93.3 | 0.56 | 1.98 |
| 907 | 3.85 | 34.36 | 77.0 | 0.31 | 2.72 |
| 1129 | 3.37 | 34.47 | 64.3 | 0.46 | 2.31 |
| 1341 | 3.02 | 34.52 | 57.5 | 0.73 | 1.89* |
| 1341 | | | | | 2.09* |

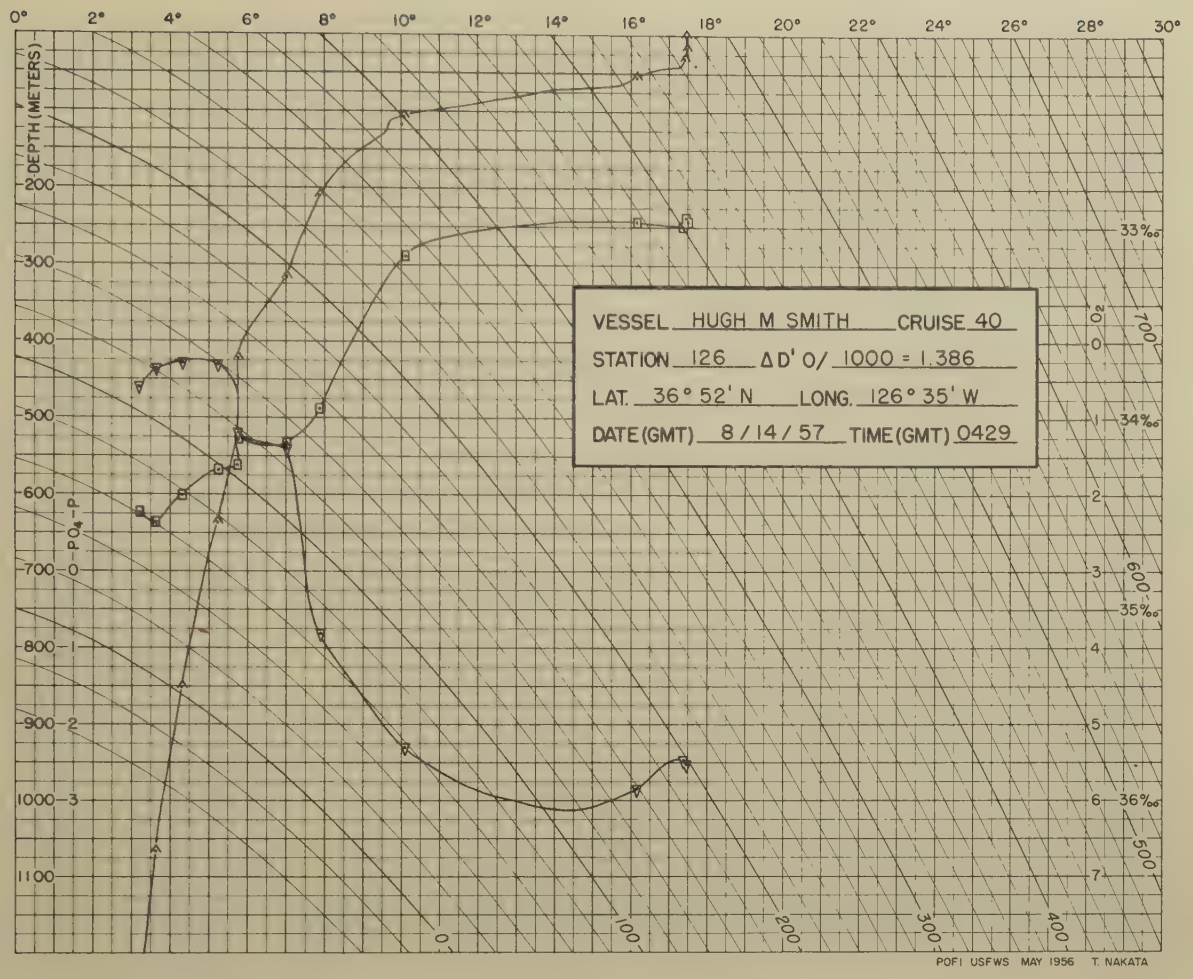
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 123 ΔD' O/ 1000 = 1.320
LAT. 37° 09' N LONG. 128° 34' W
DATE(GMT) 8 / 13 / 57 TIME(GMT) 0433
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 8. Wind: 000°, 15 kt. Sea: 3-5 ft. Wire angle: 22°.
BT slide: 348. Dry bulb: 64.3°F. Wet bulb: 60.0°F. Barometric pressure: 1023 mb.

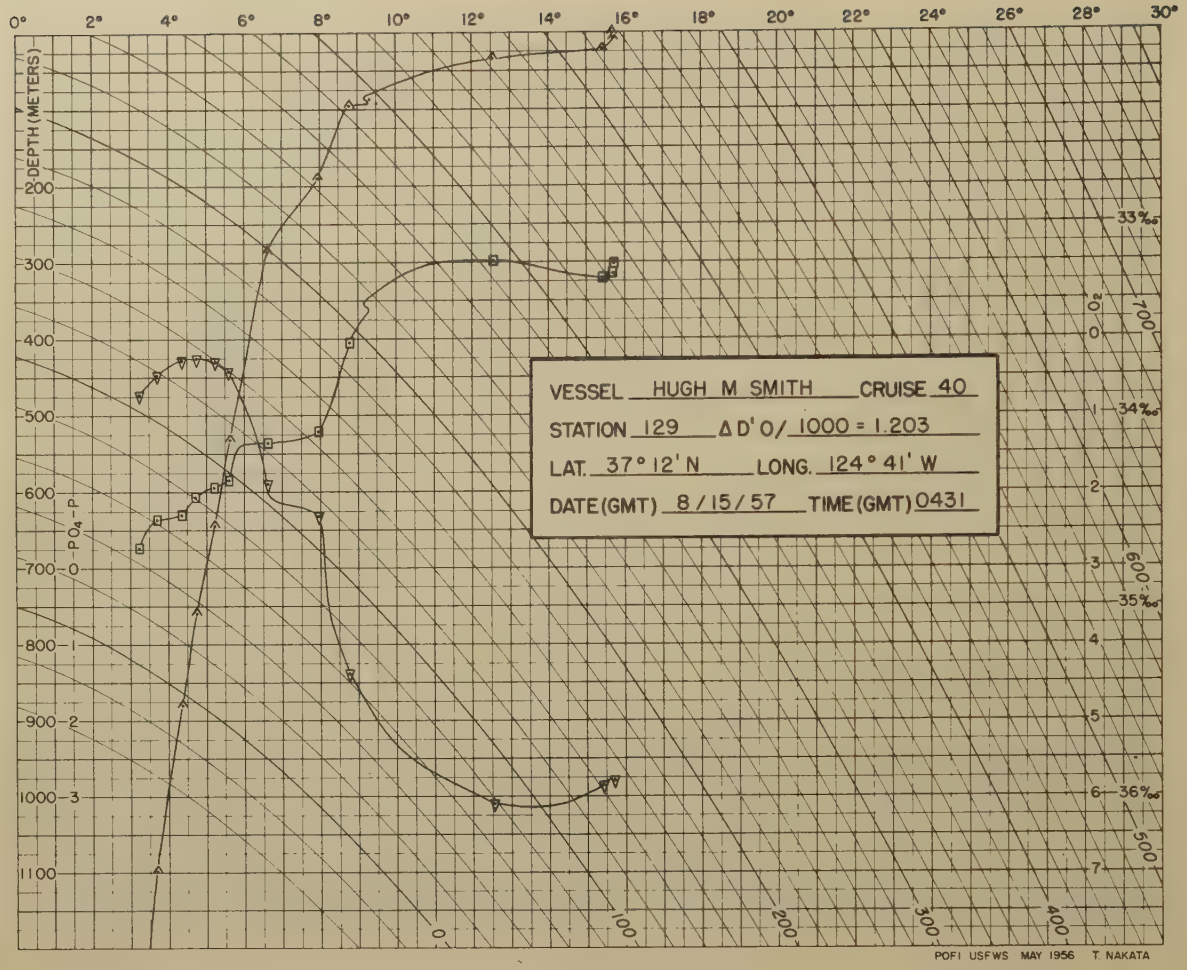
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 17.94 | 33.10 | 406.0 | 5.45 | 0.50 |
| 19 | 17.96 | 33.10 | 406.3 | 5.43 | 0.48 |
| 38 | 17.78 | 33.12 | 400.6 | 5.46 | 0.50 |
| 57 | 17.15 | 33.10 | 387.8 | 5.56 | 0.49 |
| 134 | 8.90 | 33.64 | 193.0 | 3.63 | 1.24 |
| 210 | 7.60 | 33.89 | 156.0 | 3.13 | 1.58 |
| 316 | 6.14 | 34.02 | 127.2 | 2.01 | 1.99 |
| 428 | 5.68 | 34.14 | 112.9 | 1.00 | 2.45 |
| 536 | 4.94 | 34.22 | 98.5 | 0.79 | 2.10 |
| 645 | 4.62 | 34.33 | 87.0 | 0.37 | 2.30 |
| 859 | 3.96 | 34.45 | 71.1 | 0.39 | 2.22 |
| 1075 | 3.46 | 34.56 | 58.3 | 0.44 | 2.50 |
| 1280 | 3.06 | 34.58 | 53.1 | 0.64 | 2.08* |
| 1280 | | | | | 1.93* |

* Values of duplicate did not agree within 0.02 μg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 126 ΔD' O/ 1000 = 1.386
LAT. 36° 52' N LONG. 126° 35' W
DATE (GMT) 8/14/57 TIME (GMT) 0429
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 2. Wind: 330°, 20 kt. Sea: 3-5 ft. Wire angle: 29°.
BT slide: 356. Dry bulb: 63.0°F. Wet bulb: 60.9°F. Barometric pressure: 1020 mb.

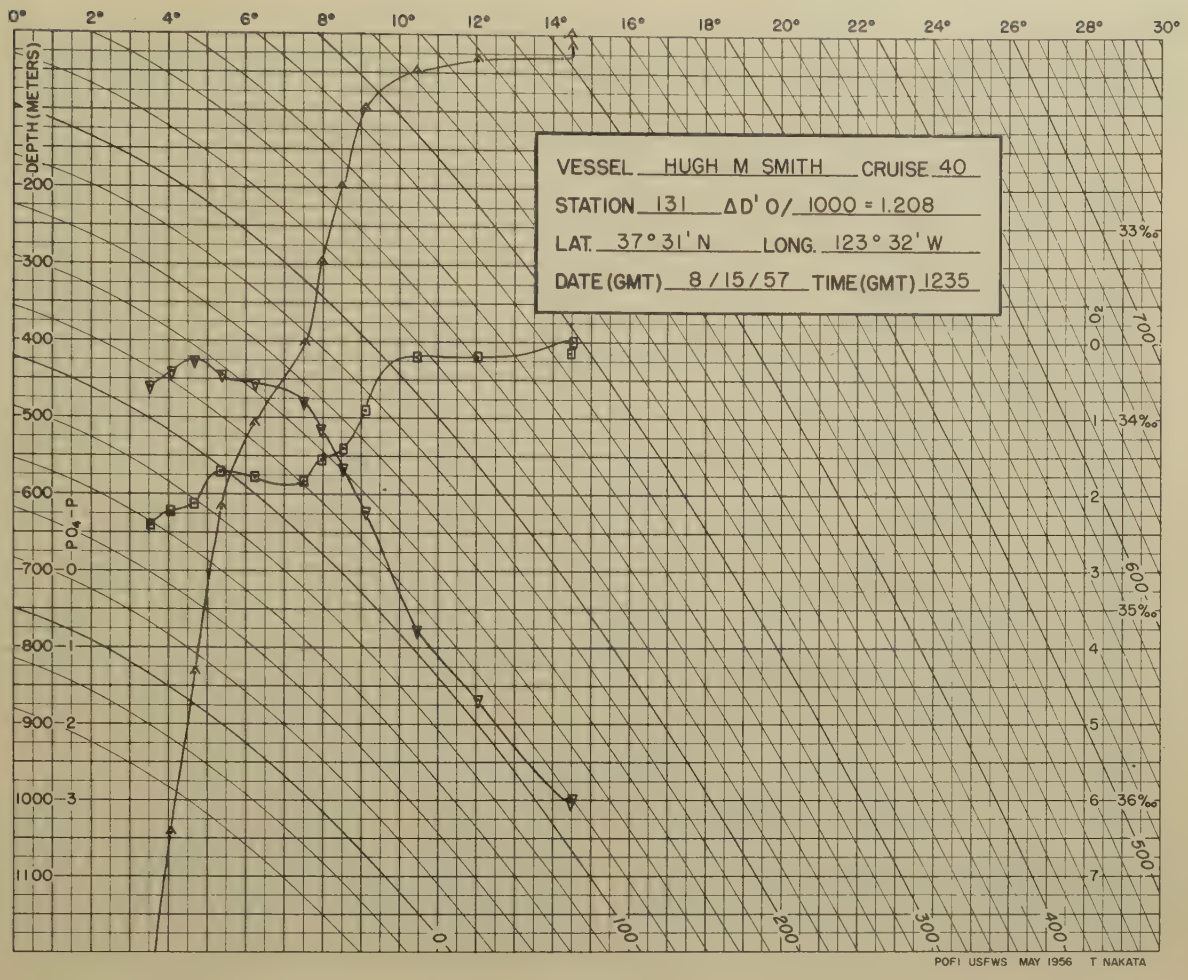
| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 17.44 | 32.95 | 405.2 | 5.50 | 0.57 |
| 15 | 17.46 | 32.97 | 404.1 | 5.50 | 0.51 |
| 29 | 17.40 | 32.99 | 401.2 | 5.48 | 0.54 |
| 53 | 16.16 | 32.97 | 375.4 | 5.84 | 0.55 |
| 105 | 10.08 | 33.15 | 247.6 | 5.30 | 1.23 |
| 209 | 7.88 | 33.95 | 155.2 | 3.80 | 1.94 |
| 314 | 7.01 | 34.13 | 129.9 | 1.40 | 2.10 |
| 422 | 5.77 Q | 34.11 | 116.2 | 1.22 | 3.04 |
| 528 | 5.73 | 34.25 | 105.2 | 0.54 | 1.78 |
| 636 | 5.22 | 34.27 | 97.9 | 0.30 | 3.04 |
| 850 | 4.32 | 34.40 | 78.6 | 0.27 | 3.39 |
| 1065 | 3.62 | 34.54 | 61.2 | 0.36 | 2.82 |
| 1272 | 3.18 | 34.49 | 61.0 | 0.60 | 2.87 |


VESSEL HUGH M SMITH CRUISE 40
STATION 129 Δ D' O/ 1000 = 1.203
LAT. 37° 12' N LONG. 124° 41' W
DATE (GMT) 8/15/57 TIME (GMT) 0431
DEPTH (METERS)
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 1. Wind: 320°, 17 kt. Sea: 3-5 ft. Wire angle: 28°, 28°. BT slide: 365. Dry bulb: 61.1°F. Wet bulb: 59.2°F. Barometric pressure: 1017 mb.

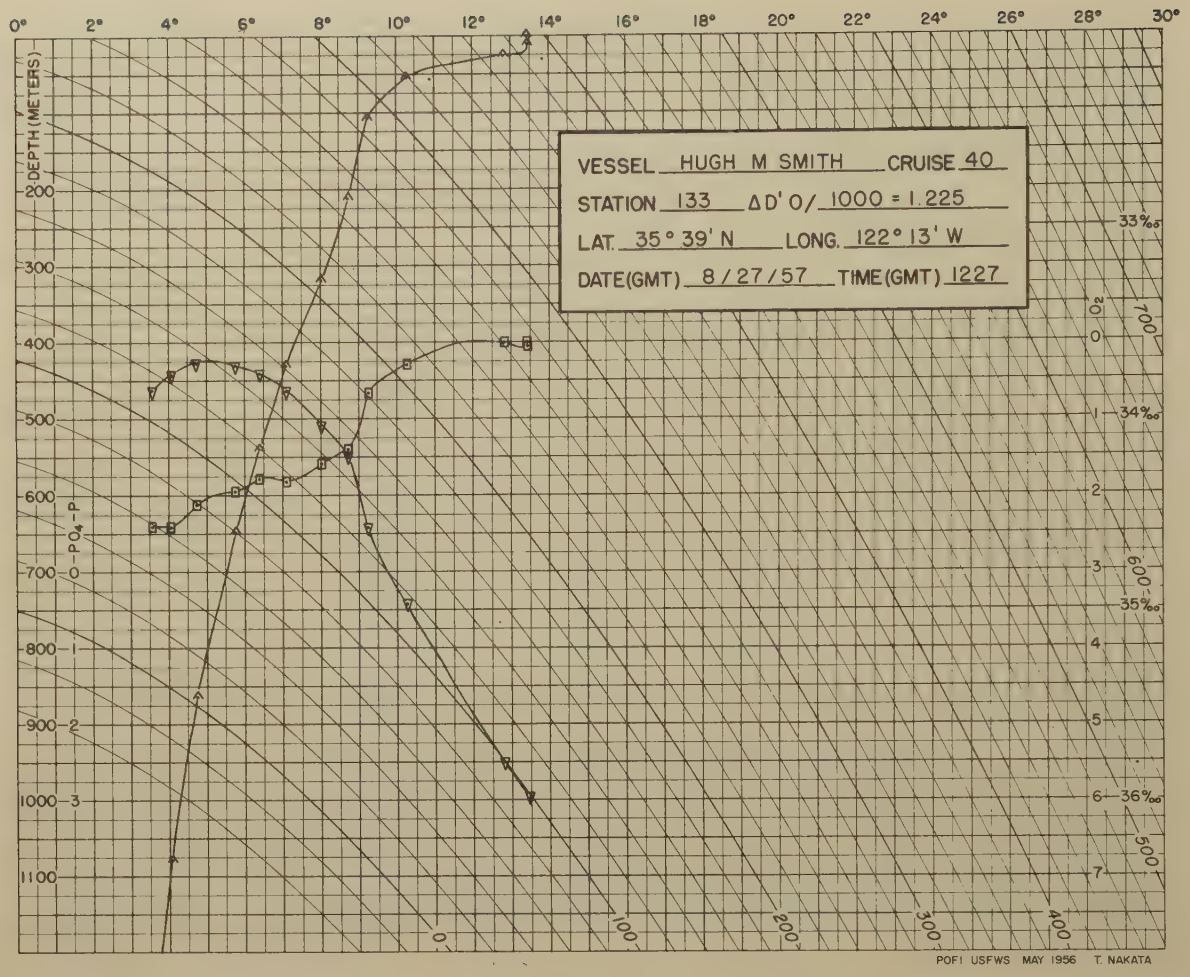
| | Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 15.68 | 33.21 | 347.8 | 5.80 | 0.57 |
| | 8 | 15.70 | 33.26 | 344.6 | 5.79 | 0.84 |
| | 21 | 15.42 | 33.28 | 337.0 | 5.85 | 0.64 |
| | 34 | 12.56 | 33.19 | 287.1 | 6.10 | 0.73 |
| | 95 | 8.78 | 33.62 | 192.8 | 4.38 | 1.09 |
| | 190 | 7.94 | 34.09 | 145.6 | 2.32 | 2.08 |
| I | 287 | 6.64 | 34.14 | 124.5 | 1.88 | 2.11 |
| II | 534 | 5.61 | 34.34 | 97.2 | 0.43 | 3.06 |
| | 645 | 5.22 | 34.38 | 89.7 | 0.31 | 2.80 |
| | 759 | 4.74 | 34.43 | 80.6 | 0.26 | 2.95 |
| | 879 | 4.36 | 34.52 | 70.0 | 0.28 | 2.80 |
| | 1099 | 3.70 | 34.54 | 62.0 | 0.48 | 2.97 |
| | 1308 | 3.24 | 34.69 | 46.5 | 0.73 | 2.66* |
| | 1308 | | | | | 2.83* |

* Values of duplicate did not agree within 0.02 μg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 131 ΔD' O/ 1000 = 1.208
LAT. 37° 31' N LONG. 123° 32' W
DATE (GMT) 8 / 15 / 57 TIME (GMT) 1235
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

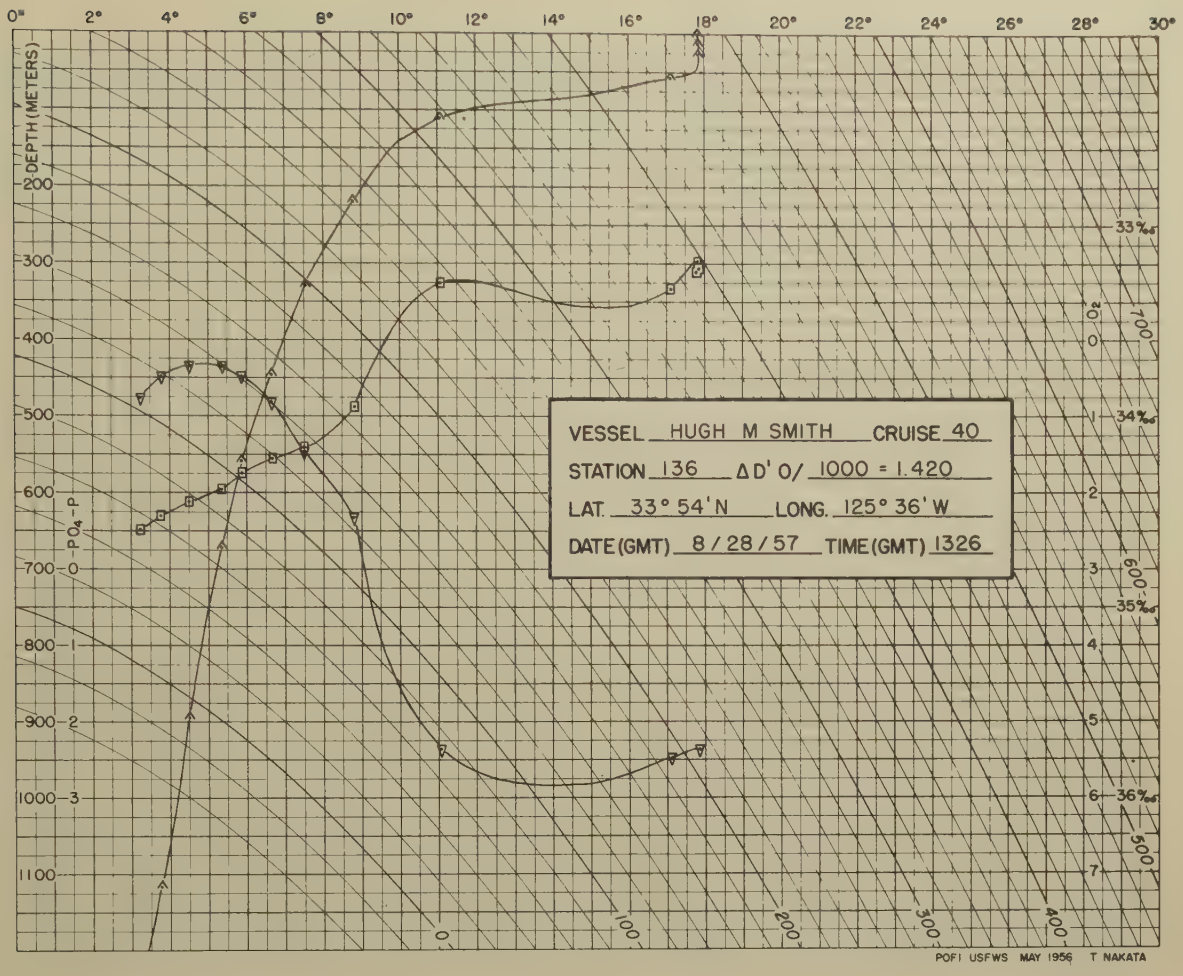
Weather: 00, cloud coverage not recorded. Wind: 320°, 23 kt. Sea: 5-8 ft. Wire angle: 27°. BT slide: 369. Dry bulb: 58.3°F. Wet bulb: 56.4°F. Barometric pressure: 1016 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 14.46 | 33.66 | 289.4 | 6.02 | 0.63 |
| 14 | 14.52 | 33.60 | 295.0 | 6.00 | 0.63 |
| 33 | 12.04 | 33.68 | 241.8 | 4.68 | 1.50 |
| 48 | 10.44 | 33.68 | 214.1 | 3.77 | 1.76 |
| 96 | 9.11 | 33.96 | 172.7 | 2.24 | 1.27 |
| 198 | 8.54 | 34.16 | 149.2 | 1.67 | 2.22 |
| 297 | 7.96 | 34.22 | 136.1 | 1.14 | 2.27 |
| 403 | 7.52 | 34.33 | 122.0 | 0.79 | 2.09 |
| 508 | 6.24 | 34.34 | 106.8 | 0.54 | 2.83 |
| 618 | 5.36 | 34.29 | 98.0 | 0.44 | 2.34 |
| 834 | 4.66 | 34.45 | 78.3 | 0.26 | 1.57 |
| 1043 | 4.04 | 34.49 | 69.0 | 0.40 | 3.03 |
| 1255 | 3.52 | 34.56 | 58.9 | 0.59 | 2.43 |


VESSEL HUGH M SMITH CRUISE 40
STATION 133 ΔD' O/ 1000 = 1.225
LAT. 35° 39' N LONG. 122° 13' W
DATE(GMT) 8/27/57 TIME(GMT) 1227
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 00, cloud coverage 2. Wind: 320°, 18 kt. Sea: 3-5 ft. Wire angle: 26°.
BT slide: 374. Dry bulb: 59.8°F. Wet bulb: 57.0°F. Barometric pressure: 1020 mb.

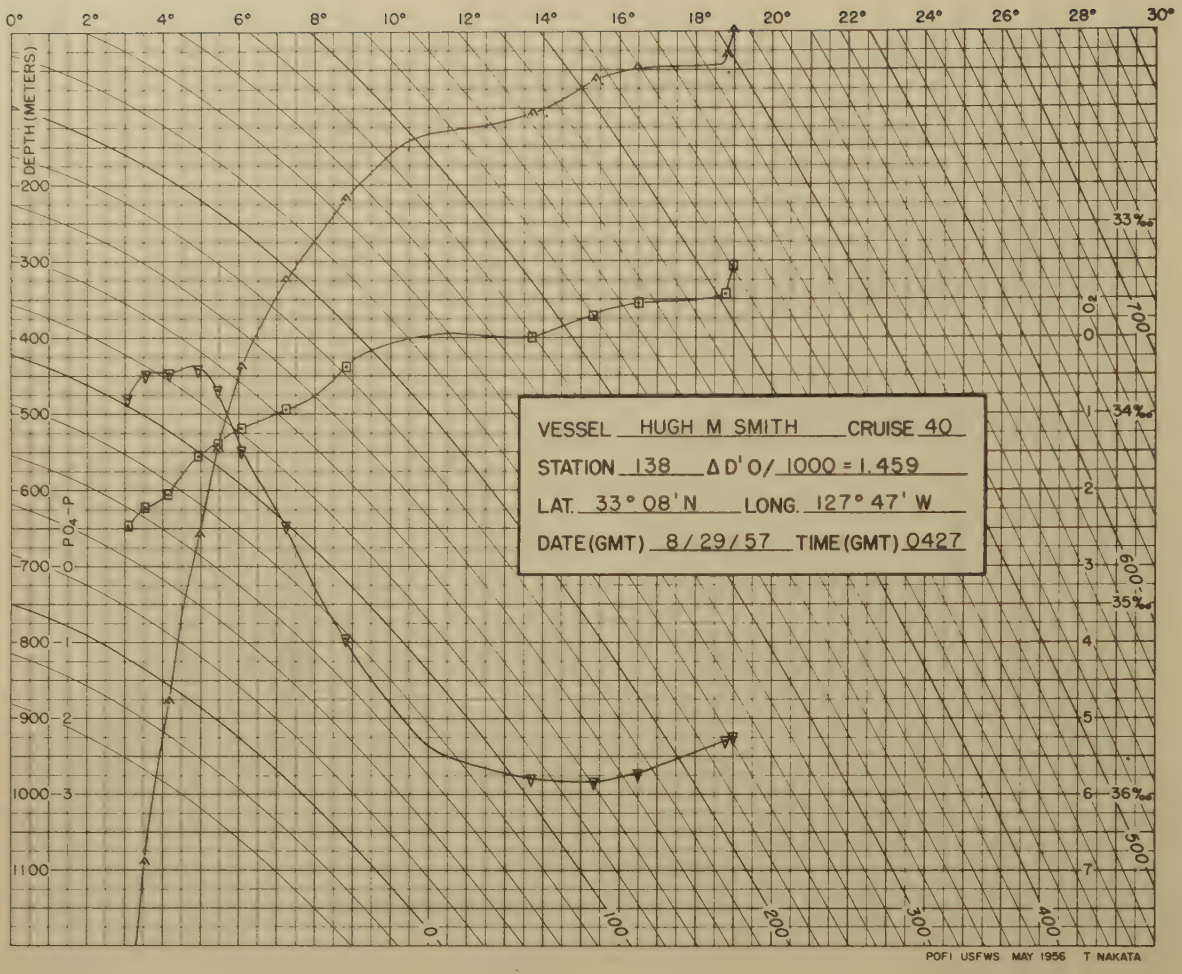
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 13.44 | 33.60 | 273.7 | 5.96 | 1.12 |
| 10 | 13.44 | 33.62 | 272.1 | 5.96 | 0.88 |
| 24 | 12.84 | 33.60 | 262.3 | 5.50 | 1.08 |
| 53 | 10.26 | 33.71 | 209.0 | 3.42 | 1.86 |
| 106 | 9.25 | 33.86 | 182.0 | 2.42 | 1.29 |
| 212 | 8.74 | 34.16 | 152.1 | 1.49 | 2.60 |
| 319 | 8.00 | 34.23 | 136.0 | 1.07 | 3.07 |
| 431 | 7.10 | 34.33 | 116.2 | 0.62 | 3.40 |
| 539 | 6.41 | 34.31 | 109.0 | 0.40 | 2.66 |
| 648 | 5.76 | 34.38 | 95.8 | 0.30 | 3.17 |
| 863 | 4.74 | 34.45 | 79.1 | 0.27 | 3.47 |
| 1078 | 4.06 | 34.56 | 63.9 | 0.42 | 3.43 |
| 1283 | 3.56 | 34.56 | 59.1 | 0.61 | 2.36 |


VESSEL HUGH M SMITH CRUISE 40
STATION 136 ΔD' O/ 1000 = 1.420
LAT. 33° 54' N LONG. 125° 36' W
DATE(GMT) 8/28/57 TIME(GMT) 1326
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 00, cloud coverage 3. Wind: 320°, 20 kt. Sea: 3-5 ft. Wire angle: 20°.
BT slide: 386. Dry bulb: 63.0°F. Wet bulb: 58.0°F. Barometric pressure: 1021 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 17.82 | 33.24 | 392.9 | 5.35 | 0.58 |
| 10 | 17.84 | 33.22 | 395.0 | 5.35 | 0.54 |
| 25 | 17.84 | 33.19 | 397.1 | 5.37 | 0.51 |
| 55 | 17.12 | 33.33 | 370.3 | 5.49 | 0.54 |
| 110 | 11.06 | 33.30 | 252.5 | 5.36 | 0.76 |
| 218 | 8.80 | 33.95 | 168.6 | 2.31 | 2.02 |
| 328 | 7.53 | 34.16 | 134.7 | 1.46 | 2.72 |
| 445 | 6.67 | 34.22 | 118.8 | 0.81 | 2.85 |
| 558 | 5.87 | 34.29 | 103.8 | 0.48 | 3.46 |
| 671 | 5.36 | 34.38 | 91.3 | 0.35 | 3.12 |
| 894 | 4.52 | 34.45 | 76.8 | 0.33 | 3.39 |
| 1117 | 3.78 | 34.52 | 64.2 | 0.48 | 3.40 |
| 1328 | 3.25 | 34.58 | 55.0 | 0.76 | 2.42* |
| 1328 | | | | | 2.17* |

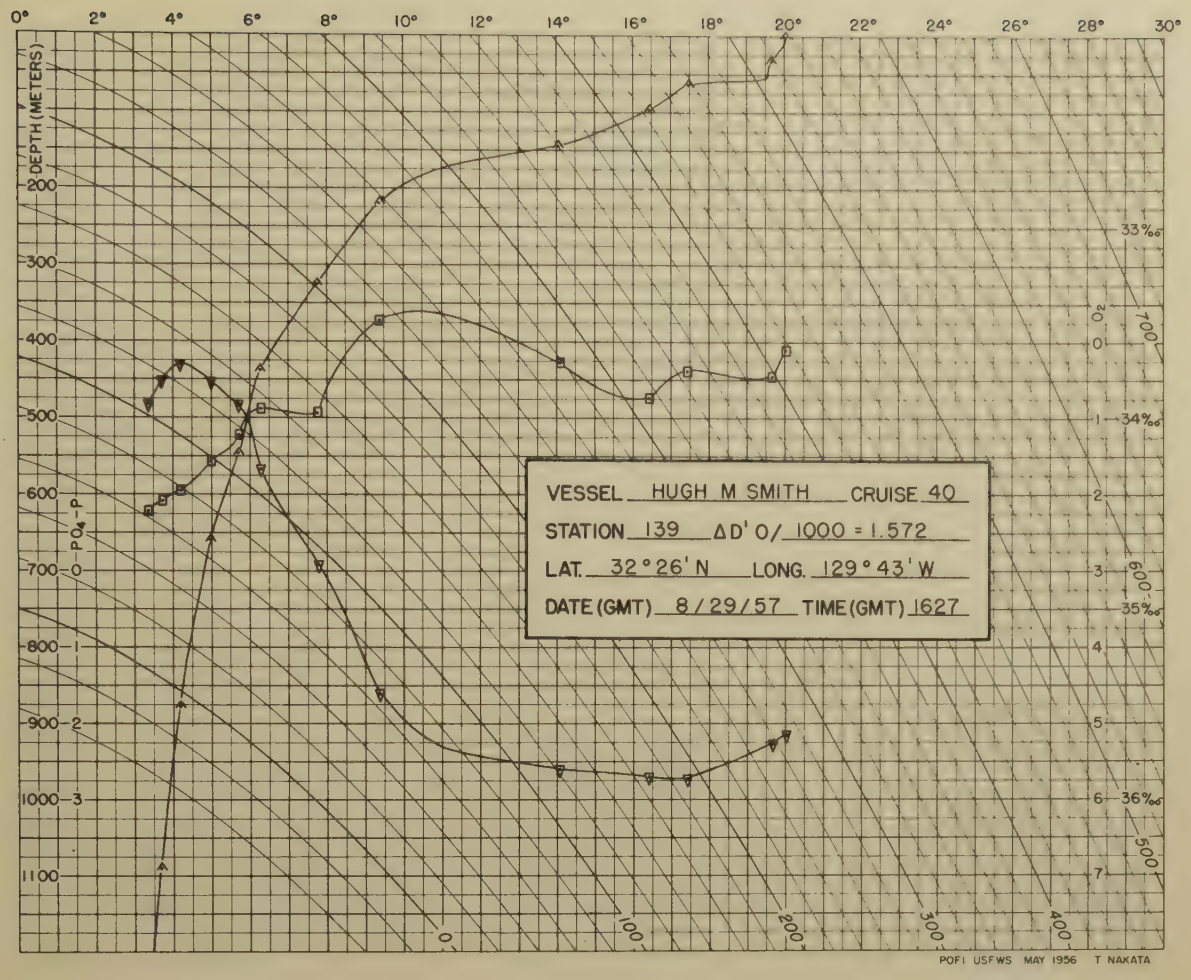
* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 138 Δ D' O/ 1000 = 1.459
LAT. 33° 08' N LONG. 127° 47' W
DATE (GMT) 8/29/57 TIME (GMT) 0427
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

Weather: 02, cloud coverage 4. Wind: 330°, 08 kt. Sea: 1-3 ft. Wire angle: 06°.
BT slide: 392. Dry bulb: 66.1°F. Wet bulb: 61.3°F. Barometric pressure: 1020 mb.

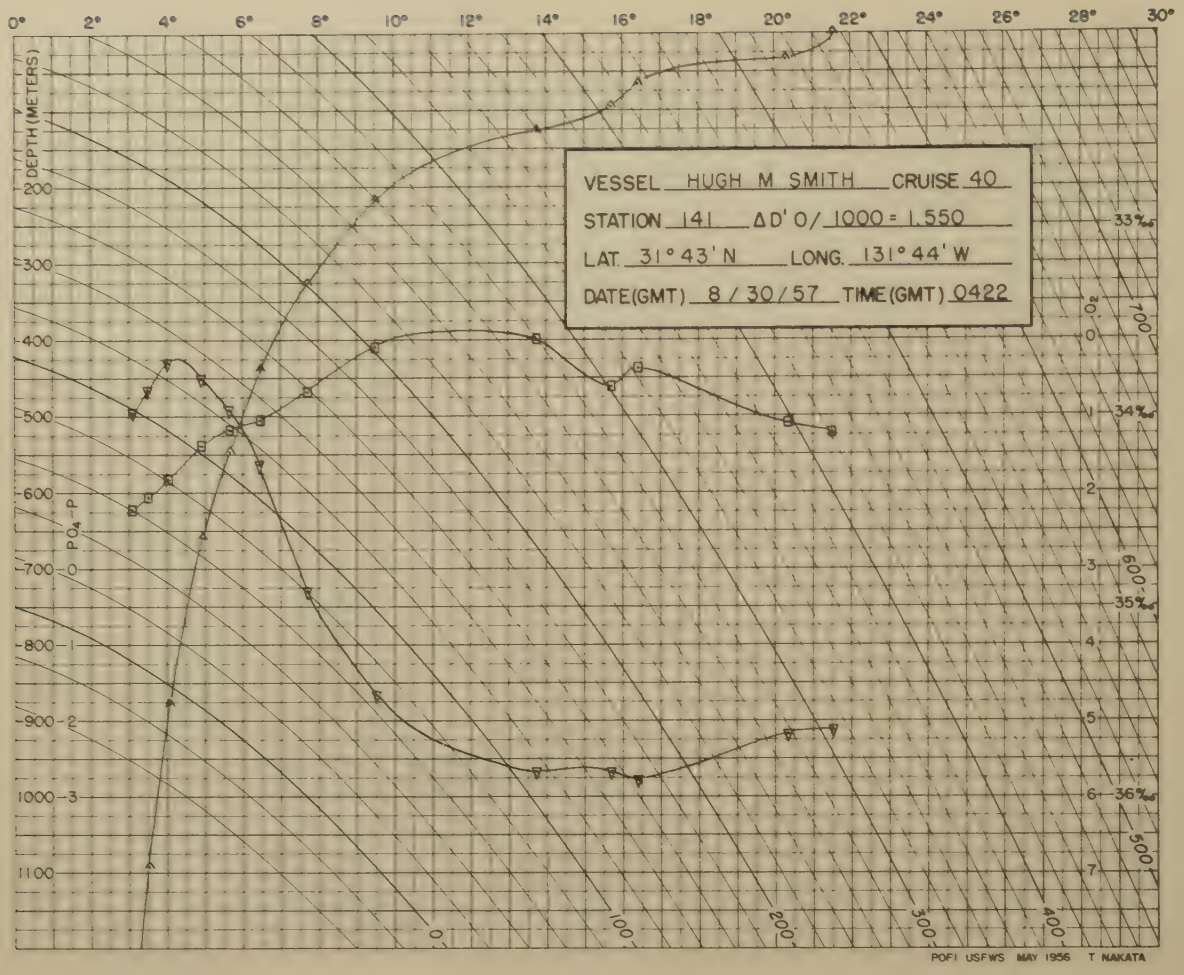
| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 18.98 | 33.22 | 421.7 | 5.25 | 0.47 |
| 32 | 18.79 | 33.37 | 406.1 | 5.28 | 0.47 |
| 48 | 16.48 | 33.42 | 349.6 | 5.72 | 0.49 |
| 64 | 15.34 | 33.49 | 320.0 | 5.84 | 0.47 |
| 107 | 13.71 | 33.60 | 278.9 | 5.78 | 0.51 |
| 219 | 8.82 | 33.75 | 183.8 | 3.94 | 1.88 |
| 326 | 7.24 | 33.98 | 144.5 | 2.45 | 2.34 |
| 439 | 6.07 | 34.07 | 122.6 | 1.47 | 3.09 |
| 547 | 5.45 | 34.16 | 108.8 | 0.68 | 3.35 |
| 659 | 4.94 | 34.22 | 98.5 | 0.39 | 2.90 |
| 878 | 4.16 | 34.42 | 75.4 | 0.46 | 3.26 |
| 1092 | 3.54 | 34.49 | 64.3 | 0.47 | 2.99 |
| 1307 | 3.08 | 34.58 | 53.3 | 0.79 | 3.01* |
| 1307 | | | | | 3.12* |

* Values of duplicate did not agree within 0.02 µg at./L. tolerance so both are carried.


VESSEL HUGH M SMITH CRUISE 40
STATION 139 ΔD' O/ 1000 = 1.572
LAT. 32°26' N LONG. 129°43' W
DATE (GMT) 8/29/57 TIME (GMT) 1627
DEPTH (METERS)
POFI USFWS MAY 1956 T NAKATA

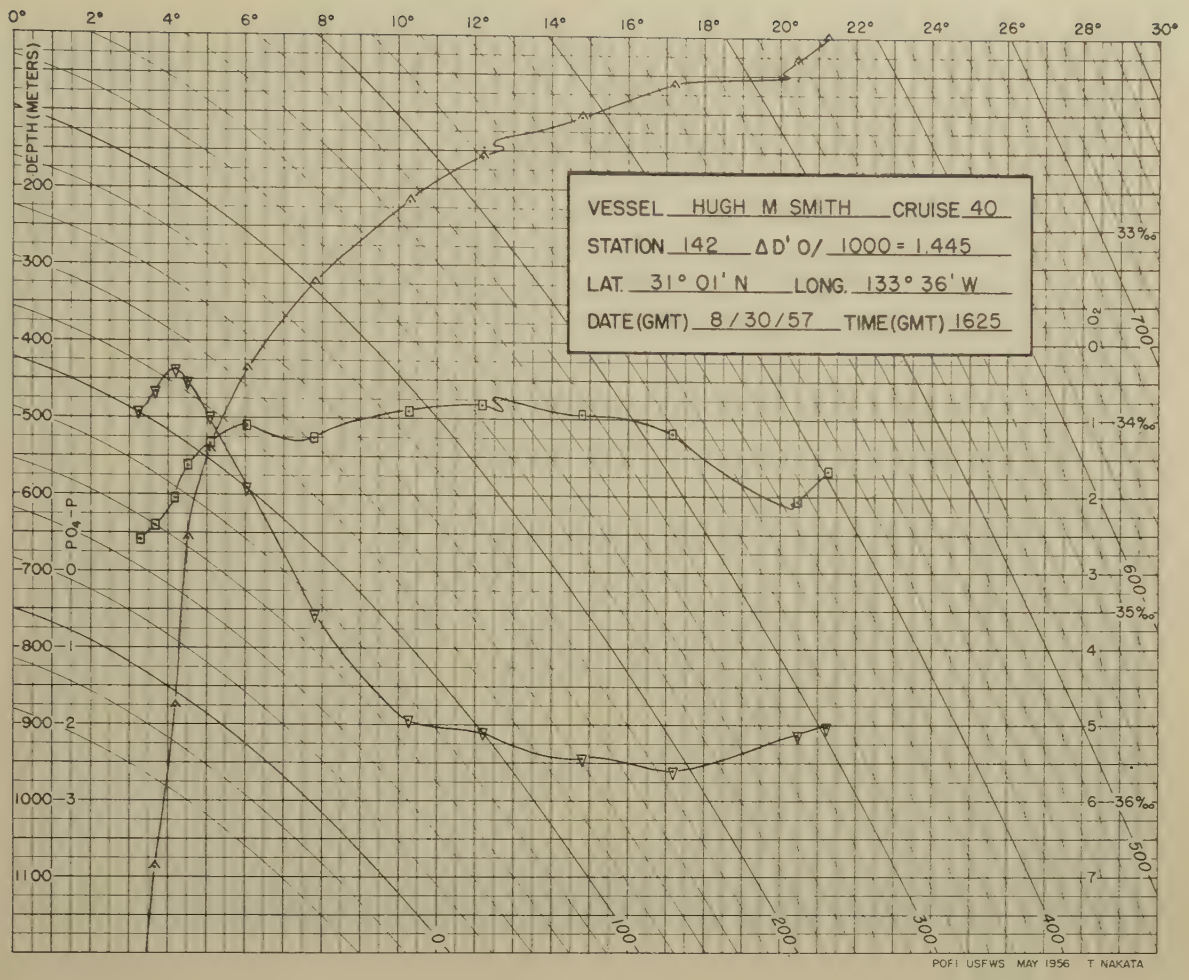
Weather: 02, cloud coverage 1. Wind: 340°, 05 kt. Sea: < 1 ft. Wire angle: 04°.
BT slide: 395. Dry bulb: 67.8°F. Wet bulb: 62.1°F. Barometric pressure: 1020 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 20.02 | 33.64 | 416.6 | 5.16 | - |
| 32 | 19.67 | 33.78 | 397.7 | 5.25 | - |
| 64 | 17.43 | 33.75 | 346.8 | 5.72 | - |
| 96 | 16.43 | 33.89 | 314.1 | 5.71 | - |
| 143 | 14.08 | 33.71 | 278.1 | 5.59 | - |
| 218 | 9.39 | 33.49 | 211.6 | 4.60 | - |
| 325 | 7.77 | 33.98 | 151.6 | 2.92 | - |
| 438 | 6.30 | 33.95 | 134.7 | 1.66 | - |
| 546 | 5.73 | 34.09 | 117.3 | 0.84 | - |
| 659 | 5.00 | 34.23 | 98.3 | 0.54 | - |
| 878 | 4.20 | 34.38 | 78.8 | 0.31 | - |
| 1091 | 3.70 | 34.43 | 70.2 | 0.53 | - |
| 1307 | 3.36 | 34.49 | 62.7 | 0.82 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 141 ΔD' O/ 1000 = 1.550
LAT. 31° 43' N LONG. 131° 44' W
DATE(GMT) 8 / 30 / 57 TIME(GMT) 0422
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

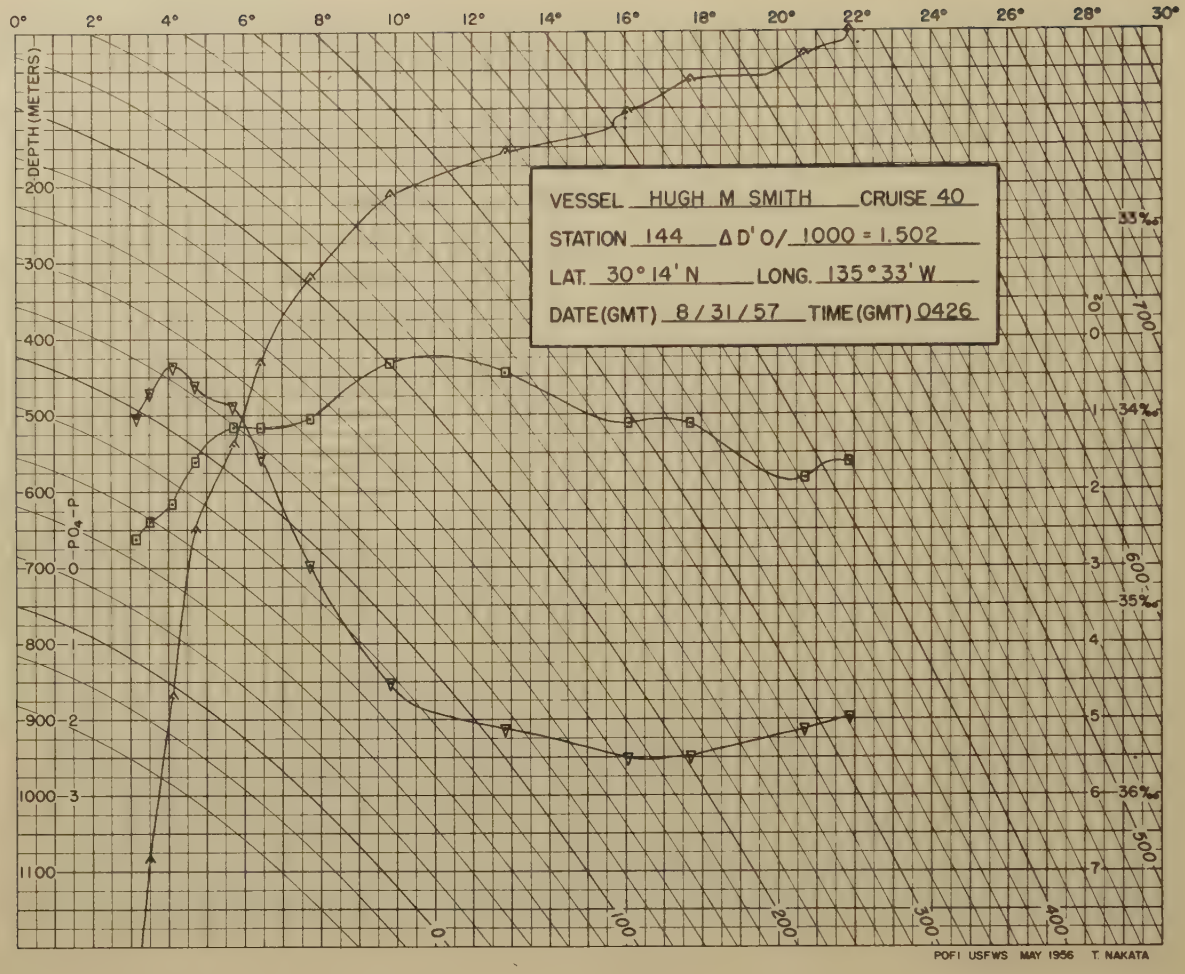
Weather: 02, cloud coverage 3. Wind: 270°, 04 kt. Sea: < 1 ft. Wire angle: 03°.
BT slide: 400. Dry bulb: 70.5°F. Wet bulb: 64.0°F. Barometric pressure: 1020 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 21.54 | 34.09 | 423.2 | 5.13 | - |
| 32 | 20.32 | 34.04 | 395.2 | 5.17 | - |
| 64 | 16.41 | 33.75 | 324.0 | 5.78 | - |
| 95 | 15.71 | 33.84 | 302.5 | 5.67 | - |
| 127 | 13.74 | 33.60 | 279.5 | 5.65 | - |
| 217 | 9.52 | 33.64 | 202.4 | 4.65 | - |
| 325 | 7.72 | 33.87 | 159.0 | 3.29 | - |
| 438 | 6.48 | 34.02 | 131.5 | 1.62 | - |
| 546 | 5.66 | 34.07 | 117.8 | 0.92 | - |
| 659 | 4.94 | 34.16 | 103.0 | 0.50 | - |
| 879 | 4.06 | 34.33 | 81.2 | 0.29 | - |
| 1092 | 3.52 | 34.43 | 68.6 | 0.67 | - |
| 1306 | 3.11 | 34.49 | 60.4 | 0.95 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 142 ΔD' O/ 1000 = 1.445
LAT. 31° 01' N LONG. 133° 36' W
DATE (GMT) 8/30/57 TIME (GMT) 1625
DEPTH (METERS)
PO4-P
POF: USFWS MAY 1956 T NAKATA

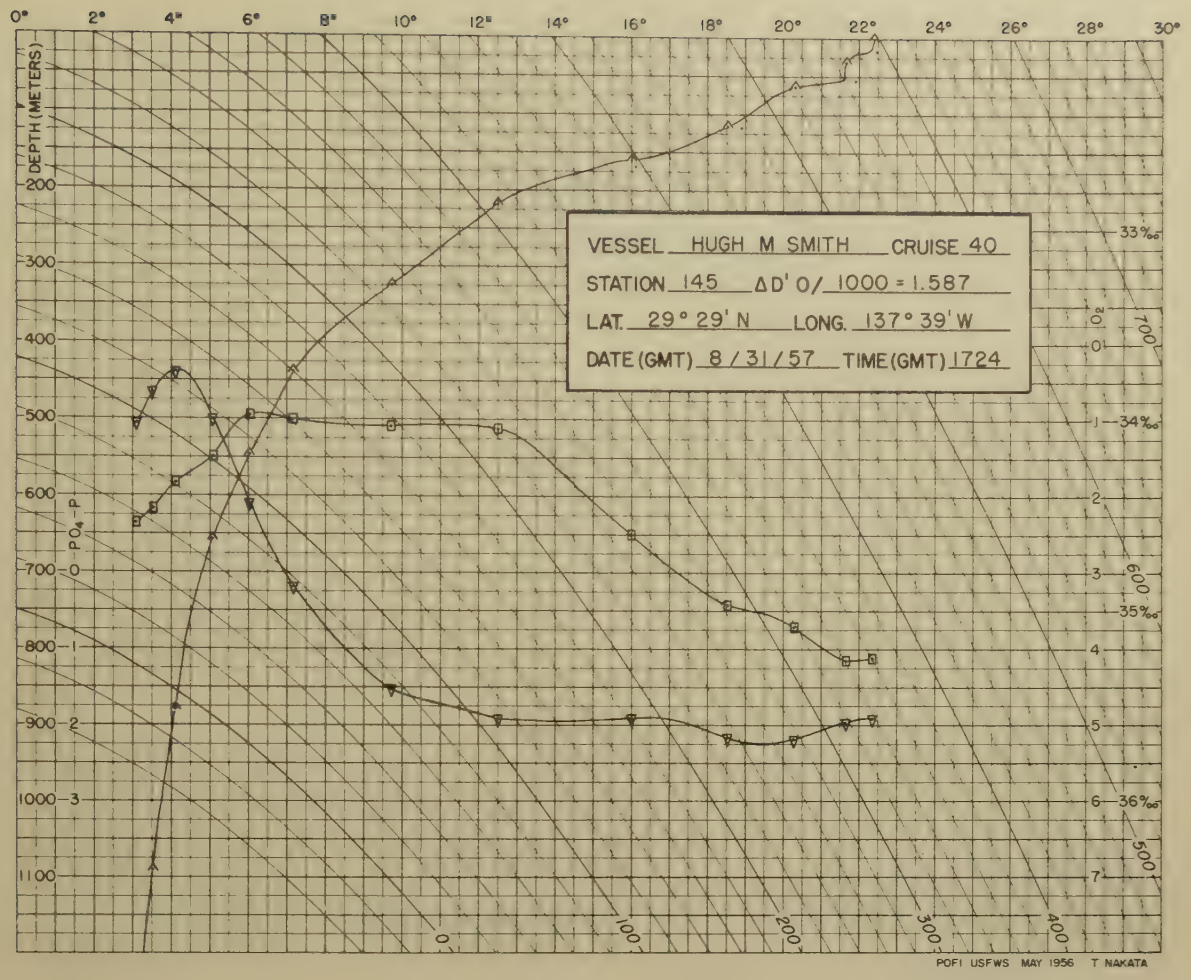
Weather: 03, cloud coverage 4. Wind: 270°, 08 kt. Sea: < 1 ft. Wire angle: 05°.
BT slide: 404. Dry bulb: 72.0°F. Wet bulb: 67.6°F. Barometric pressure: 1021 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|
| 0 | 21.24 | 34.27 | 402.4 | 5.03 | - |
| 31 | 20.44 | 34.43 | 370.1 | 5.13 | - |
| 63 | 17.18 | 34.07 | 317.7 | 5.61 | - |
| 105 | 14.80 | 33.98 | 273.0 | 5.45 | - |
| 158 | 12.20 | 33.93 | 226.2 | 5.11 | - |
| 216 | 10.26 | 33.96 | 190.5 | 4.94 | - |
| 324 | 7.81 | 34.11 | 142.4 | 3.57 | - |
| 438 | 6.04 | 34.04 | 124.6 | 1.91 | - |
| 544 | 5.08 | 34.14 | 106.0 | 1.02 | - |
| 658 | 4.52 | 34.25 | 91.9 | 0.54 | - |
| 877 | 4.19 | 34.42 | 75.7 | 0.38 | - |
| 1088 | 3.66 | 34.56 | 60.2 | 0.67 | - |
| 1303 | 3.26 | 34.63 | 51.2 | 0.92 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 144 Δ D' O/ 1000 = 1.502
LAT. 30° 14' N LONG. 135° 33' W
DATE(GMT) 8/31/57 TIME(GMT) 0426
DEPTH (METERS)
PO4-P
O2
POFI USFWS MAY 1956 T. NAKATA

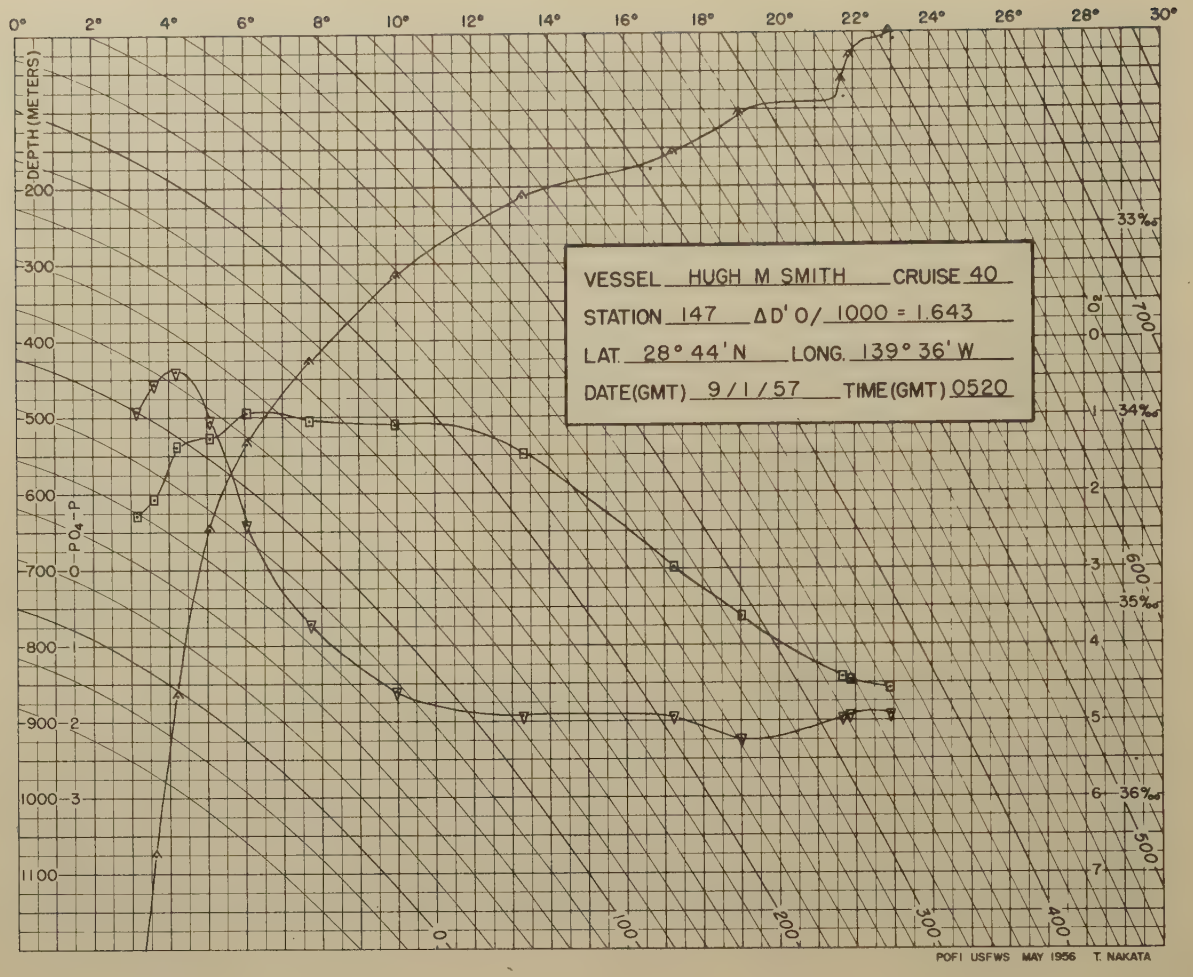
Weather 02, cloud coverage 2. Wind: 280°, 09 kt. Sea: < 1 ft. Wire angle: 07°.
BT slide: 408. Dry bulb: 72.5°F. Wet bulb: 68.0°F. Barometric pressure: 1021 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 21.84 | 34.25 | 419.3 | 4.98 | - |
| 31 | 20.69 | 34.33 | 383.7 | 5.13 | - |
| 63 | 17.70 | 34.05 | 331.2 | 5.49 | - |
| 104 | 16.06 | 34.05 | 294.3 | 5.51 | - |
| 157 | 12.86 | 33.78 | 249.5 | 5.12 | - |
| 214 | 9.84 | 33.73 | 201.0 | 4.52 | - |
| 320 | 7.74 | 34.02 | 148.3 | 2.97 | - |
| 433 | 6.44 | 34.07 | 127.3 | 1.55 | - |
| 541 | 5.70 | 34.07 | 118.3 | 0.87 | - |
| 653 | 4.72 | 34.25 | 94.0 | 0.60 | - |
| 871 | 4.10 | 34.47 | 71.0 | 0.34 | - |
| 1086 | 3.52 | 34.56 | 58.8 | 0.70 | - |
| 1302 | 3.16 | 34.65 | 48.7 | 1.03 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 145 ΔD' O/ 1000 = 1.587
LAT. 29° 29' N LONG. 137° 39' W
DATE (GMT) 8 / 31 / 57 TIME (GMT) 1724
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

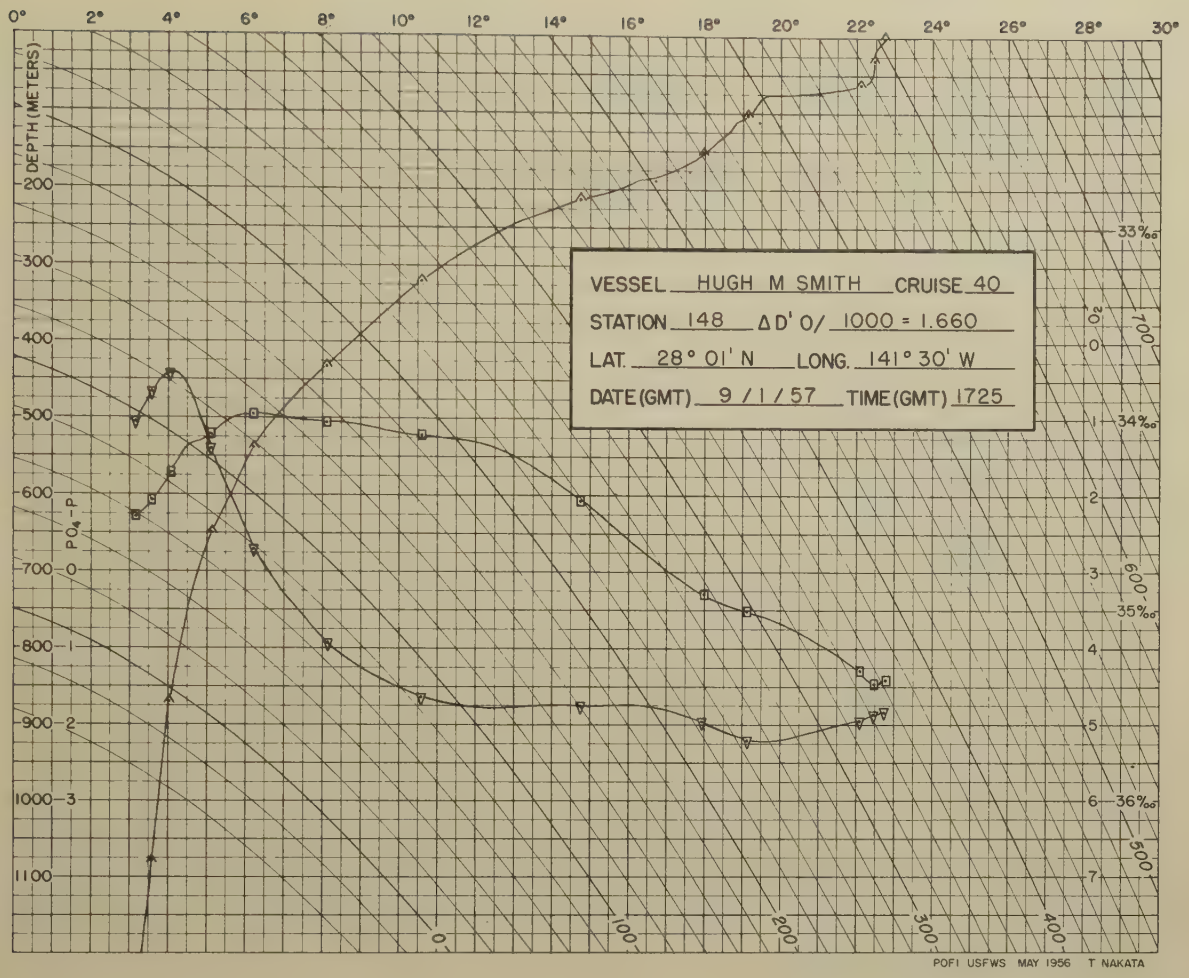
Weather: 03, cloud coverage 5. Wind: 280°, 09 kt. Sea: < 1 ft. Wire angle: 05°.
BT slide: 412. Dry bulb: 72.9°F. Wet bulb: 68.4°F. Barometric pressure: 1023 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.38 | 35.25 | 361.5 | 4.91 | - |
| 31 | 21.64 | 35.26 | 341.1 | 4.98 | - |
| 63 | 20.27 | 35.08 | 318.7 | 5.19 | - |
| 105 | 18.55 | 34.97 | 284.3 | 5.17 | - |
| 158 | 16.00 | 34.60 | 253.1 | 4.90 | - |
| 217 | 12.51 | 34.05 | 223.1 | 4.91 | - |
| 324 | 9.74 | 34.04 | 176.4 | 4.52 | - |
| 438 | 7.20 | 34.00 | 142.1 | 3.19 | - |
| 545 | 6.05 | 33.98 | 129.3 | 2.11 | - |
| 658 | 5.08 | 34.20 | 101.4 | 1.00 | - |
| 878 | 4.12 | 34.33 | 81.8 | 0.39 | - |
| 1090 | 3.54 | 34.47 | 65.9 | 0.64 | - |
| 1305 | 3.12 | 34.54 | 56.7 | 1.05 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 147 ΔD' O/ 1000 = 1.643
LAT. 28° 44' N LONG. 139° 36' W
DATE(GMT) 9/1/57 TIME(GMT) 0520
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

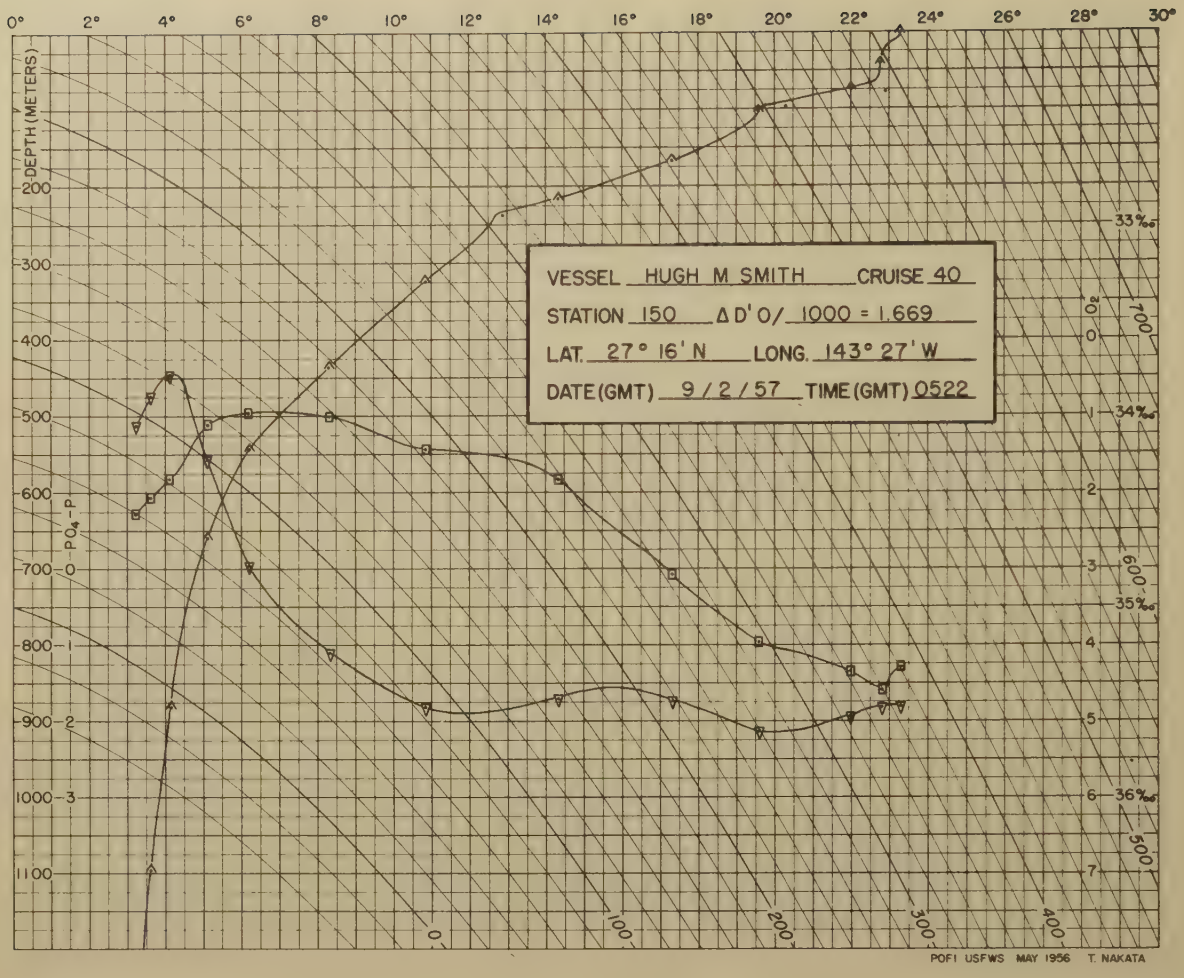
Weather: 21, cloud coverage 8. Wind: 330°, 05 kt. Sea: < 1 ft. Wire angle: 10°.
BT slide: 416. Dry bulb: 73.7°F. Wet bulb: 69.0°F. Barometric pressure: 1024 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.94 | 35.43 | 363.6 | 4.91 | - |
| 31 | 21.86 | 35.39 | 337.5 | 4.92 | - |
| 62 | 21.66 | 35.37 | 333.6 | 4.96 | - |
| 103 | 19.03 | 35.05 | 290.1 | 5.23 | - |
| 155 | 17.26 | 34.79 | 267.3 | 4.92 | - |
| 212 | 13.34 | 34.20 | 227.9 | 4.91 | - |
| 317 | 9.98 | 34.04 | 180.0 | 4.61 | - |
| 429 | 7.74 | 34.02 | 148.3 | 3.70 | - |
| 536 | 6.04 | 33.98 | 129.1 | 2.40 | - |
| 647 | 5.09 | 34.11 | 108.3 | 1.06 | - |
| 866 | 4.22 | 34.16 | 95.6 | 0.40 | - |
| 1077 | 3.62 | 34.43 | 69.5 | 0.56 | - |
| 1293 | 3.18 | 34.52 | 58.8 | 0.91 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 148 ΔD' O/ 1000 = 1.660
LAT. 28° 01' N LONG. 141° 30' W
DATE (GMT) 9 / 1 / 57 TIME (GMT) 1725
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

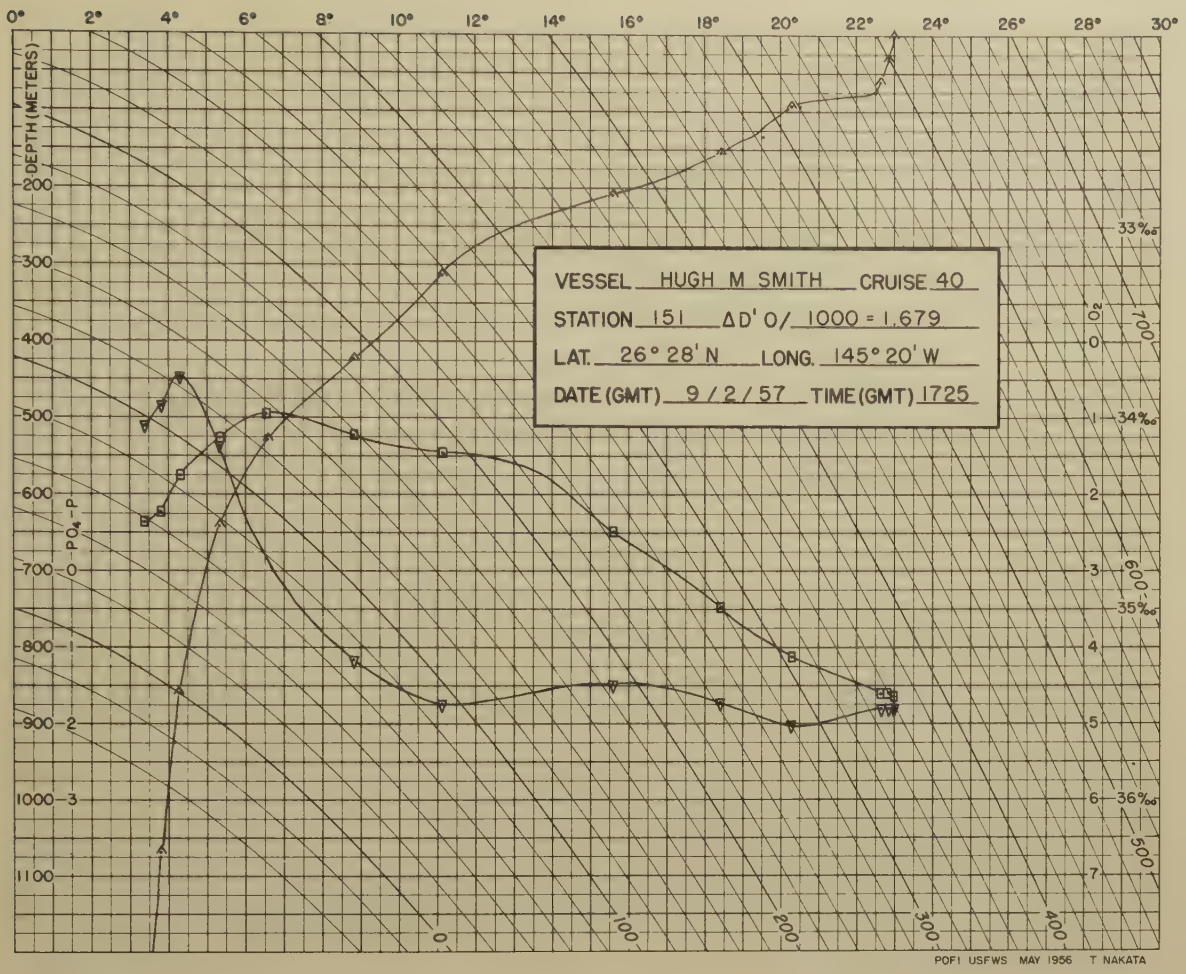
Weather: 03, cloud coverage 4. Wind: 030°, 08 kt. Sea: < 1 ft. Wire angle: 11°.
BT slide: 420. Dry bulb: 74.9°F. Wet bulb: 69.1°F. Barometric pressure: 1023 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.76 | 35.37 | 363.1 | 4.84 | - |
| 31 | 22.46 | 35.39 | 353.5 | 4.86 | - |
| 62 | 22.10 | 35.32 | 348.9 | 4.97 | - |
| 103 | 19.14 | 35.01 | 295.6 | 5.21 | - |
| 154 | 17.96 | 34.92 | 273.9 | 4.96 | - |
| 213 | 14.76 | 34.43 | 239.2 | 4.75 | - |
| 318 | 10.58 | 34.09 | 186.3 | 4.63 | - |
| 431 | 8.13 | 34.02 | 153.5 | 3.94 | - |
| 538 | 6.23 | 33.98 | 131.3 | 2.71 | - |
| 651 | 5.11 | 34.09 | 110.1 | 1.40 | - |
| 869 | 4.05 | 34.29 | 84.1 | 0.42 | - |
| 1081 | 3.58 | 34.43 | 69.2 | 0.66 | - |
| 1292 | 3.16 | 34.52 | 58.5 | 1.05 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 150 Δ D' O/ 1000 = 1.669
LAT. 27° 16' N LONG. 143° 27' W
DATE (GMT) 9 / 2 / 57 TIME (GMT) 0522
DEPTH (METERS)
P - PO4
POFI USFWS MAY 1956 T. NAKATA

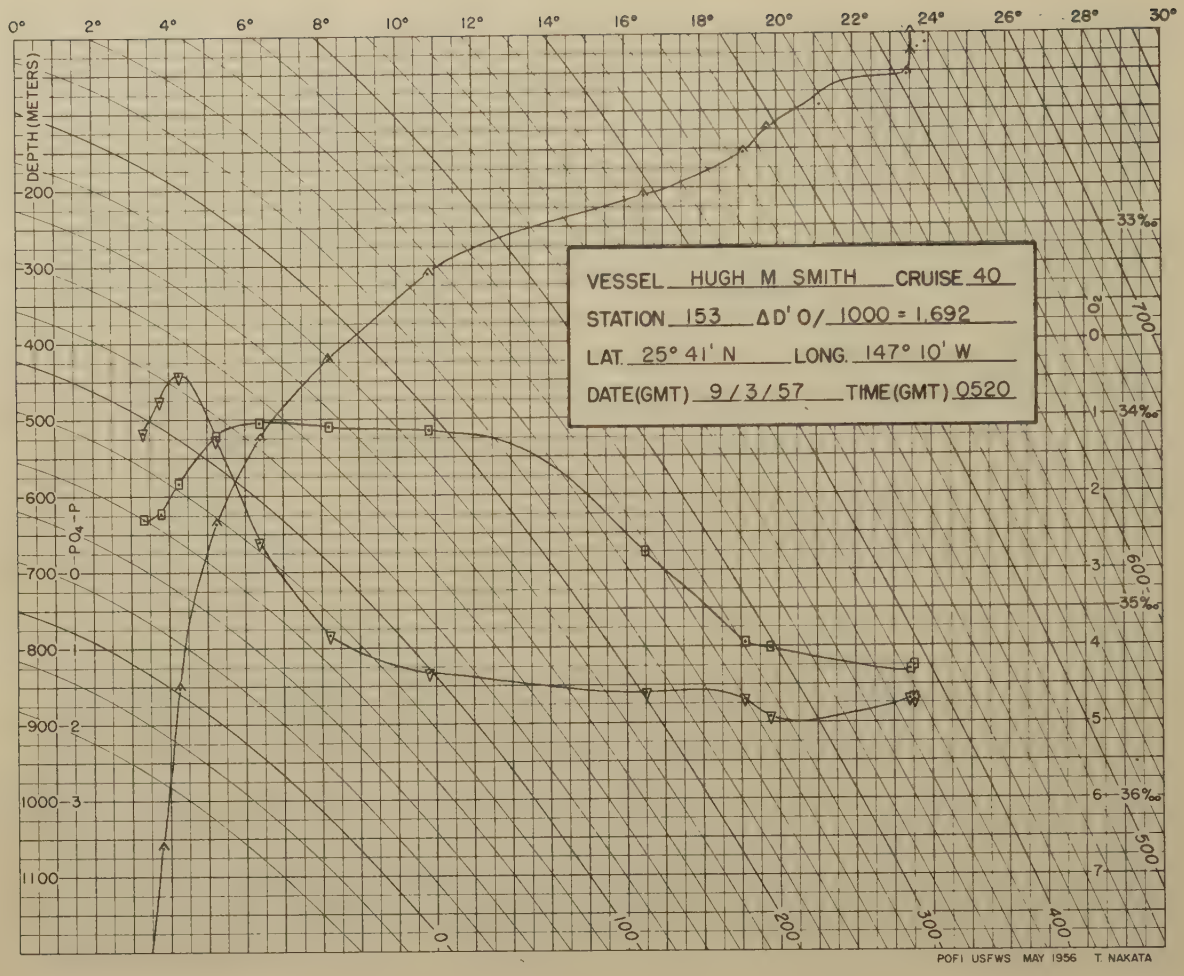
Weather: 02, cloud coverage 2. Wind: 050°, 10 kt. Sea: < 1 ft. Wire angle: 01°.
BT slide: 424. Dry bulb: 74.0°F. Wet bulb: 69.9°F. Barometric pressure: 1022 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 23.29 | 35.32 | 381.2 | 4.80 | - |
| 41 | 22.78 | 35.44 | 358.5 | 4.81 | - |
| 72 | 21.98 | 35.34 | 344.3 | 4.94 | - |
| 104 | 19.59 | 35.19 | 293.6 | 5.13 | - |
| 167 | 17.34 | 34.83 | 266.2 | 4.72 | - |
| 215 | 14.35 | 34.33 | 238.3 | 4.71 | - |
| 322 | 10.86 | 34.18 | 184.3 | 4.80 | - |
| 436 | 8.34 | 34.00 Q | 157.9 | 4.09 | - |
| 545 | 6.22 | 33.98 | 131.2 | 2.95 | - |
| 659 | 5.12 | 34.05 | 113.3 | 1.58 | - |
| 881 | 4.13 | 34.33 | 81.8 | 0.44 | - |
| 1094 | 3.62 | 34.43 | 69.5 | 0.73 | - |
| 1307 | 3.24 | 34.51 | 60.1 | 1.12 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 151 ΔD' O/ 1000 = 1.679
LAT. 26° 28' N LONG. 145° 20' W
DATE (GMT) 9 / 2 / 57 TIME (GMT) 1725
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

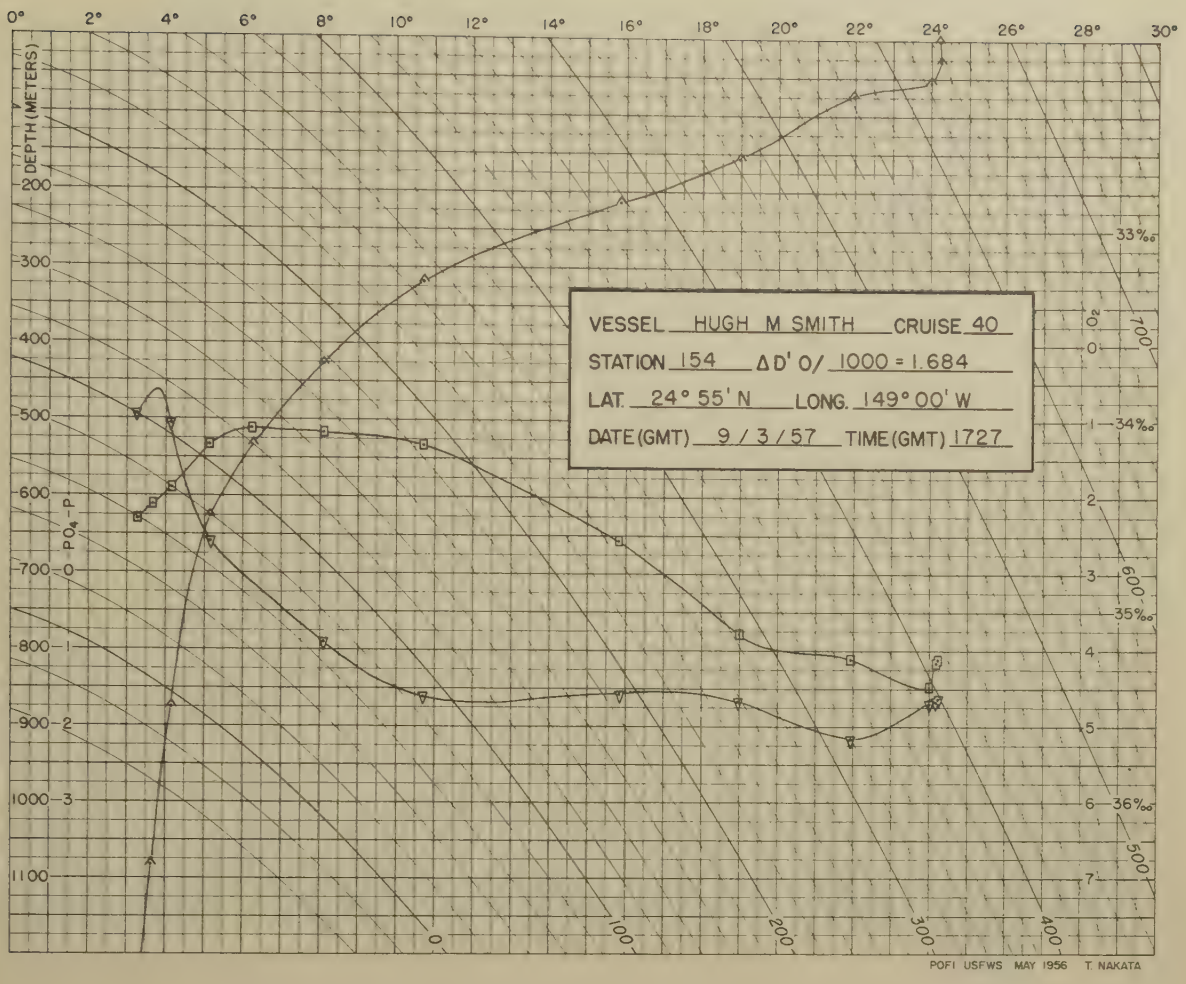
Weather: 21, cloud coverage 6. Wind: 050°, 05 kt. Sea: 1-3 ft. Wire angle 16°.
BT slide: 428. Dry bulb: 74.0°F. Wet bulb: 69.3°F. Barometric pressure: 1022 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 22.99 | 35.46 | 362.7 | 4.80 | - |
| 30 | 22.86 | 35.44 | 360.7 | 4.79 | - |
| 61 | 22.65 | 35.44 | 355.0 | 4.81 | - |
| 91 | 20.30 | 35.25 | 307.1 | 5.02 | - |
| 153 | 18.44 | 34.99 | 280.3 | 4.71 | - |
| 209 | 15.60 | 34.60 | 244.5 | 4.48 | - |
| 312 | 11.14 | 34.18 | 189.1 | 4.73 | - |
| 424 | 8.82 | 34.09 | 158.4 | 4.17 | - |
| 530 | 6.57 | 33.98 | 135.6 | NG | - |
| 641 | 5.34 | 34.11 | 111.3 | 1.38 | - |
| 859 | 4.30 | 34.31 | 85.1 | 0.47 | - |
| 1068 | 3.81 | 34.49 | 66.9 | 0.84 | - |
| 1283 | 3.38 | 34.54 | 59.1 | 1.10 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 153 ΔD' O/ 1000 = 1.692
LAT. 25° 41' N LONG. 147° 10' W
DATE(GMT) 9/3/57 TIME(GMT) 0520
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

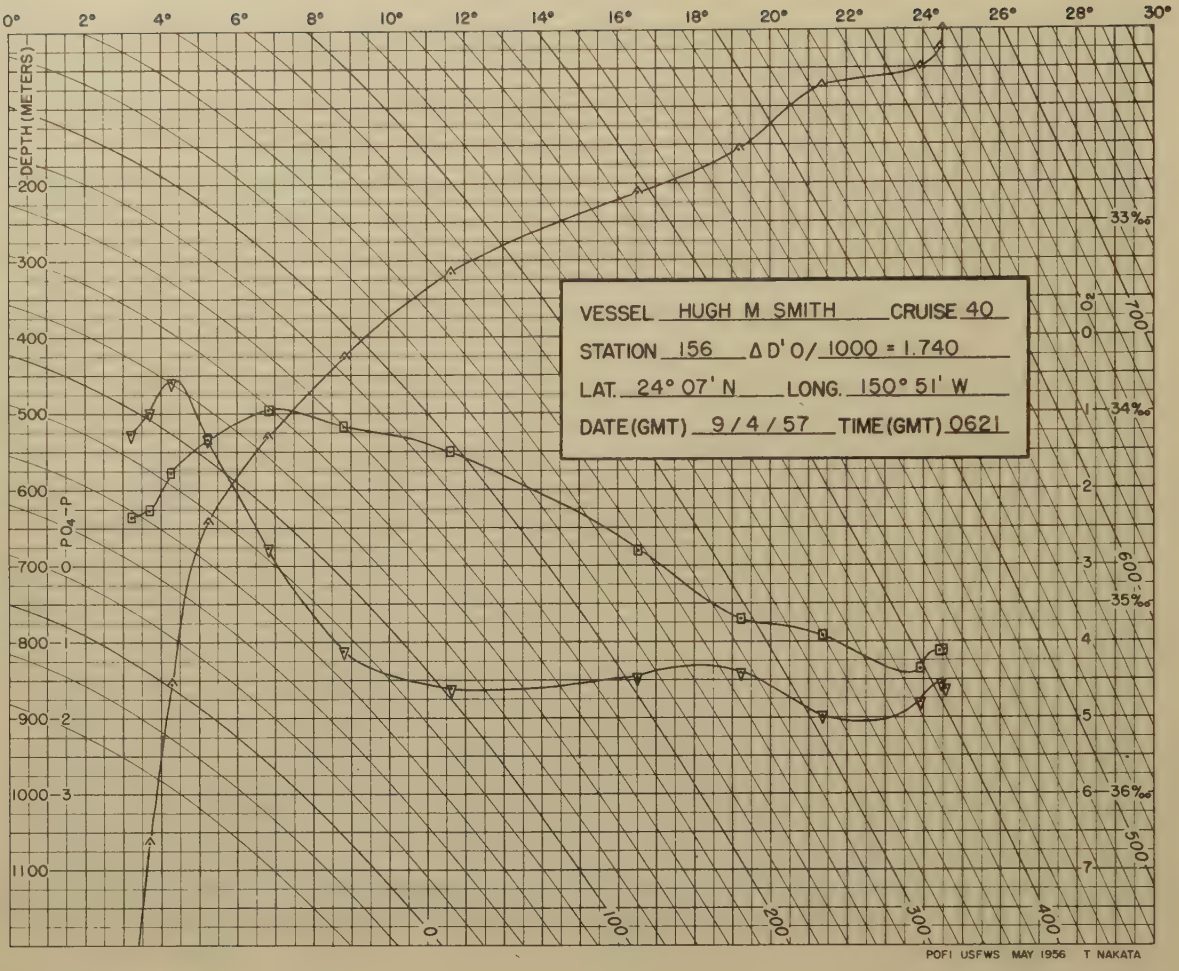
Weather: 02, cloud coverage 7. Wind: 070°, 10 kt. Sea: 1-3 ft. Wire angle: 15°.
BT slide: 431. Dry bulb: 75.9°F. Wet bulb: 70.9°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 23.54 | 35.30 | 389.6 | 4.71 | - |
| 25 | 23.52 | 35.30 | 389.0 | 4.67 | - |
| 51 | 23.42 | 35.32 | 384.9 | 4.69 | - |
| 122 | 19.76 | 35.21 | 296.3 | 4.90 | - |
| 152 | 19.11 | 35.17 | 283.3 | 4.68 | - |
| 209 | 16.50 | 34.70 | 256.6 | 4.59 | - |
| 310 | 10.84 | 34.05 | 193.5 | 4.32 | - |
| 421 | 8.21 | 34.04 | 153.3 | 3.82 | - |
| 527 | 6.39 | 34.02 | 130.3 | 2.61 | - |
| 637 | 5.26 | 34.09 | 111.8 | 1.24 | - |
| 852 | 4.26 | 34.33 | 83.1 | 0.42 | - |
| 1061 | 3.78 | 34.49 | 66.5 | 0.73 | - |
| 1273 | 3.34 | 34.52 | 60.3 | 1.17 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 154 ΔD' O/ 1000 = 1.684
LAT. 24° 55' N LONG. 149° 00' W
DATE (GMT) 9 / 3 / 57 TIME (GMT) 1727
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

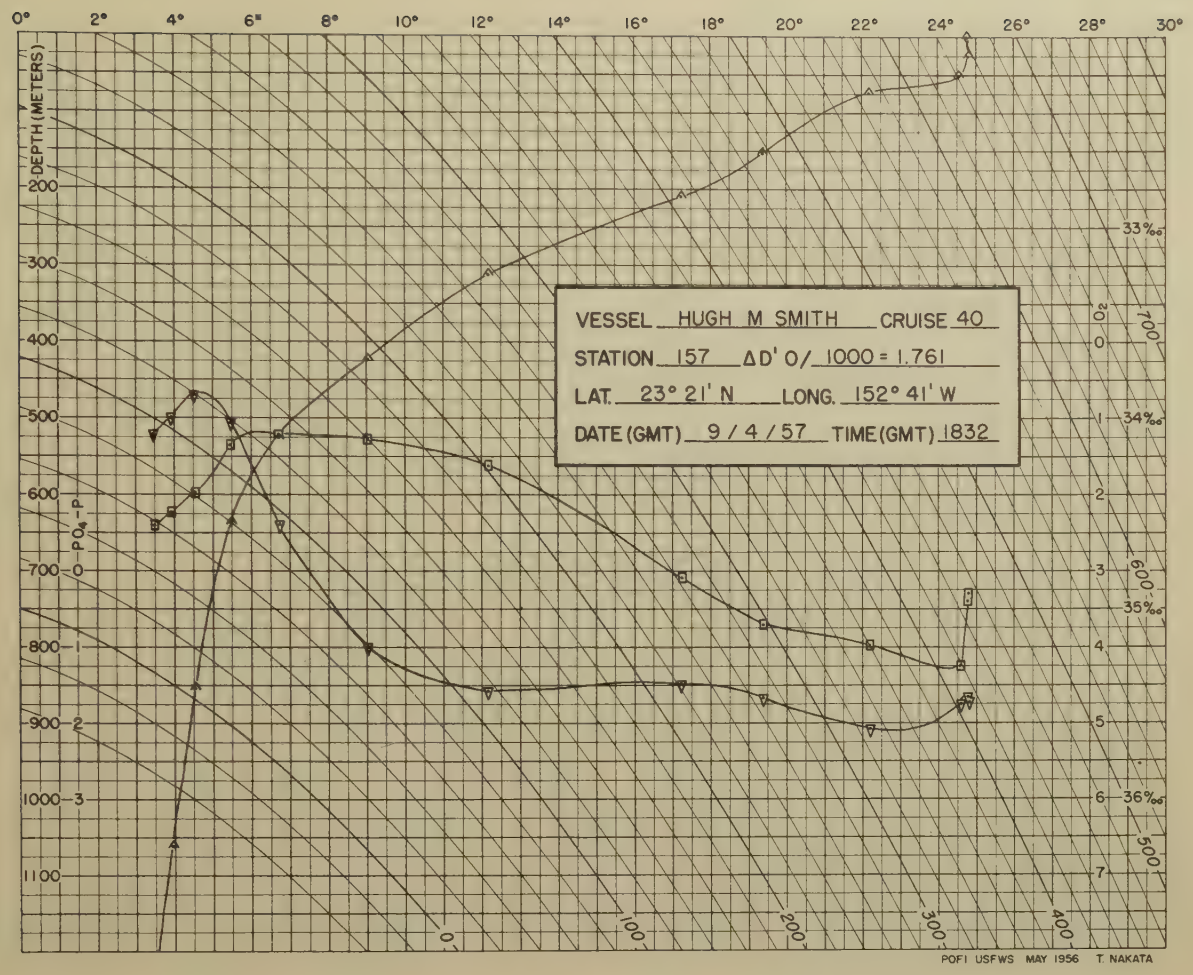
Weather: 02, cloud coverage 6. Wind: 070°, 15 kt. Sea: 1-3 ft. Wire angle: 07°, 06°. BT slide: 435. Dry bulb: 73.8°F. Wet bulb: 71.3°F. Barometric pressure: 1019 mb.

| | Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, μg at./L. |
|---|---|---|---|---|---|---|
| | 0 | 24.21 | 35.26 | 411.5 | 4.66 | - |
| | 26 | 24.24 | 35.25 | 413.1 | 4.64 | - |
| | 53 | 24.00 | 35.39 | 396.3 | 4.70 | - |
| | 73 | 21.92 | 35.25 | 349.2 | 5.17 | - |
| | 157 | 18.95 | 35.12 | 283.2 | 4.67 | - |
| | 214 | 15.85 | 34.63 | 247.6 | 4.57 | - |
| | 318 | 10.71 | 34.13 | 185.4 | 4.62 | - |
| | 427 | 8.10 | 34.07 | 149.4 | 3.89 | - |
| | 630 | 5.16 | 34.14 | 107.0 | 2.60 | - |
| | 877 | 4.16 | 34.36 | 80.0 | 1.06 | - |
| | 1083 | 3.66 | 34.45 | 68.4 | NG | - |
| I | 1294 | 3.28 | 34.52 | 59.7 | 0.93 | - |
| II | 536 | 6.28 | 34.05 | 126.5 | - | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 156 ΔD' O/ 1000 = 1.740
LAT. 24° 07' N LONG. 150° 51' W
DATE (GMT) 9/4/57 TIME (GMT) 0621
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T NAKATA

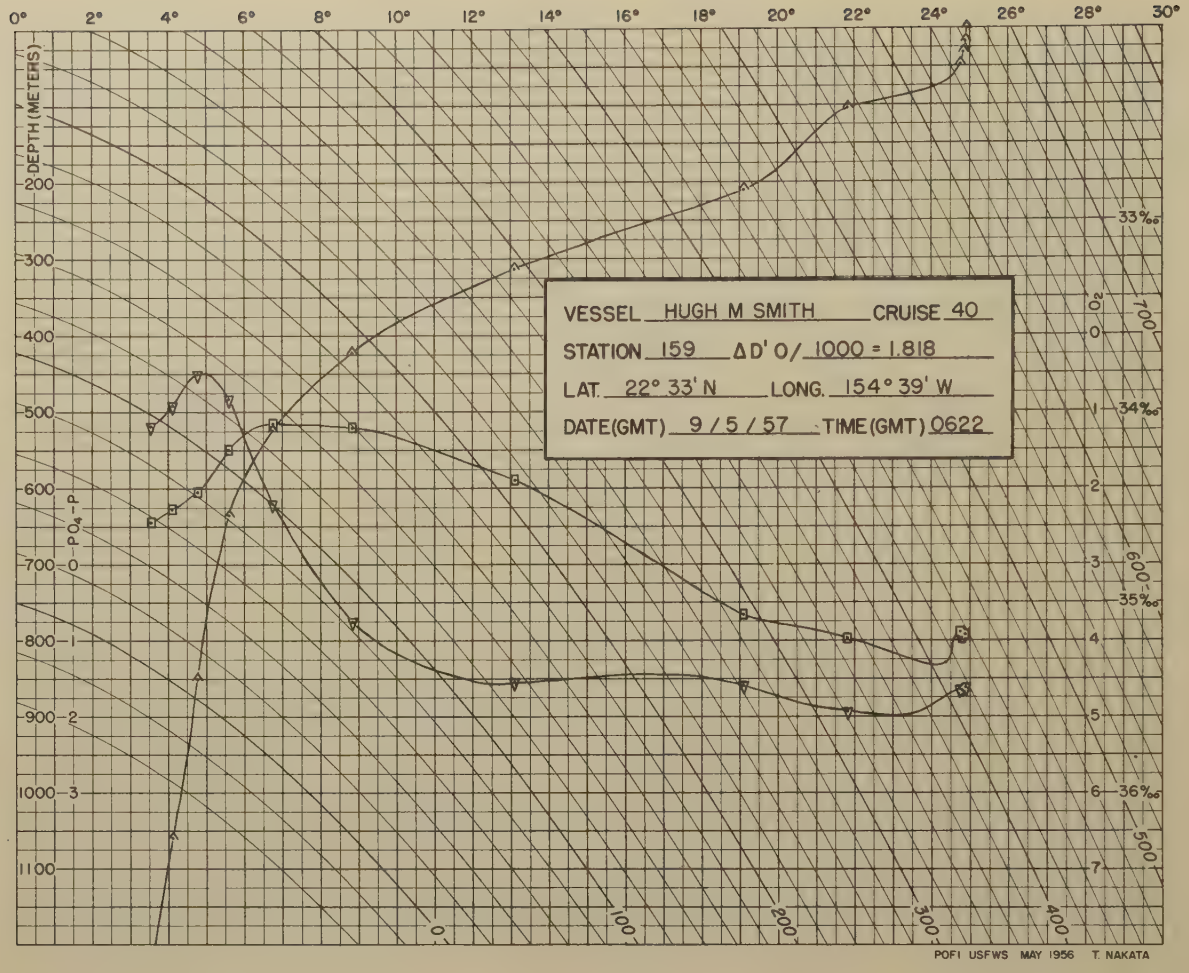
Weather: 00, cloud coverage 6. Wind: 100°, 07 kt. Sea: < 1 ft. Wire angle: 11°.
BT slide: 439. Dry bulb: 75.2°F. Wet bulb: 71.3°F. Barometric pressure: 1019 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 24.54 | 35.25 | 421.6 | 4.62 | - |
| 25 | 24.45 | 35.25 | 419.1 | 4.57 | - |
| 51 | 23.92 | 35.35 | 396.8 | 4.80 | - |
| 72 | 21.36 | 35.17 | 340.3 | 4.98 | - |
| 155 | 19.23 | 35.08 | 292.8 | 4.41 | - |
| 212 | 16.56 | 34.72 | 256.6 | 4.46 | - |
| 315 | 11.63 | 34.20 | 196.2 | 4.60 | - |
| 426 | 8.83 | 34.07 | 160.0 | 4.10 | - |
| 531 | 6.86 | 33.98 | 139.4 | 2.74 | - |
| 642 | 5.26 | 34.14 | 108.1 | 1.35 | - |
| 856 | 4.30 | 34.31 | 85.1 | 0.57 | - |
| 1063 | 3.72 | 34.51 | 64.4 | 0.98 | - |
| 1274 | 3.24 | 34.54 | 57.8 | 1.26 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 157 ΔD' O/ 1000 = 1.761
LAT. 23° 21' N LONG. 152° 41' W
DATE (GMT) 9 / 4 / 57 TIME (GMT) 1832
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

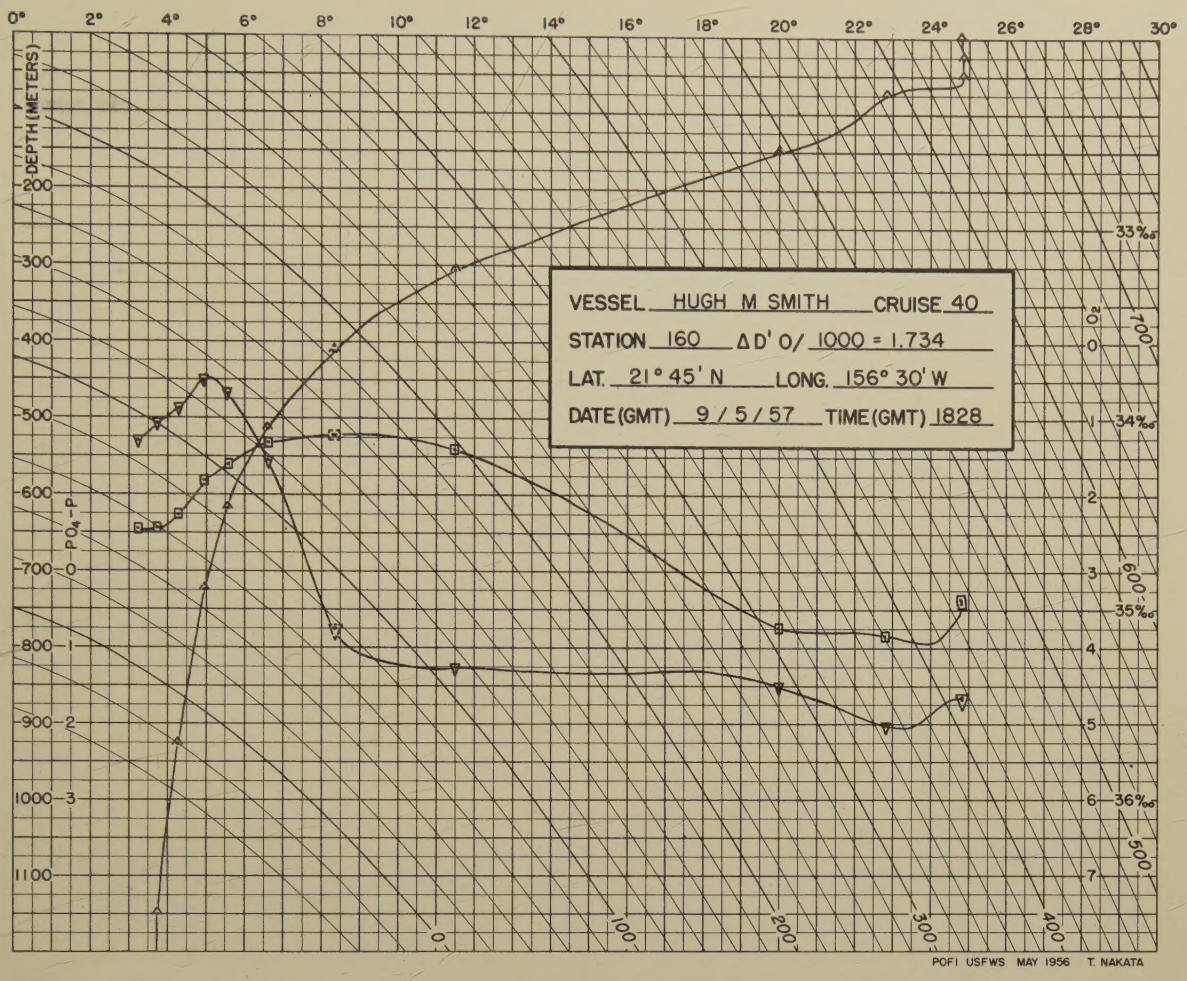
Weather: 15, cloud coverage 6. Wind: 070°, 14 kt. Sea: 3-5 ft. Wire angle: 15°.
BT slide: 443. Dry bulb: 76.5°F. Wet bulb: 72.8°F. Barometric pressure: 1018 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 24.80 | 34.92 | 452.9 | 4.73 | - |
| 25 | 24.78 | 34.96 | 449.4 | 4.67 | - |
| 51 | 24.59 | 35.30 | 419.5 | 4.76 | - |
| 72 | 22.20 | 35.19 | 361.0 | 5.07 | - |
| 153 | 19.40 | 35.08 | 297.0 | 4.67 | - |
| 210 | 17.24 | 34.83 | 263.9 | 4.49 | - |
| 312 | 12.20 | 34.25 | 202.5 | 4.58 | - |
| 421 | 9.04 | 34.11 | 160.3 | 4.00 | - |
| 525 | 6.74 | 34.09 | 129.5 | 2.39 | - |
| 636 | 5.47 | 34.14 | 110.4 | 1.05 | - |
| 853 | 4.56 | 34.38 | 82.5 | 0.69 | - |
| 1061 | 3.92 | 34.49 | 67.9 | 0.99 | - |
| 1275 | 3.47 | 34.56 | 58.3 | 1.19 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 159 ΔD' O/ 1000 = 1.818
LAT. 22° 33' N LONG. 154° 39' W
DATE(GMT) 9 / 5 / 57 TIME(GMT) 0622
DEPTH (METERS)
PO4 - P
POFI USFWS MAY 1956 T. NAKATA

Weather: 02, cloud coverage 2. Wind: 060°, 07 kt. Sea: 1-3 ft. Wire angle: 15°.
BT slide: 447. Dry bulb: 77.4°F. Wet bulb: 70.9°F. Barometric pressure: 1017 mb.

| Depth, m. | T, °C. | S, °/oo | $\delta$ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 24.90 | 35.17 | 437.7 | 4.63 | - |
| 15 | 24.89 | 35.16 | 438.2 | 4.62 | - |
| 31 | 24.82 | 35.19 | 434.1 | 4.66 | - |
| 46 | 24.76 | 35.16 | 434.4 | 4.63 | - |
| 102 | 21.82 | 35.19 | 350.9 | 4.92 | - |
| 210 | 19.14 | 35.07 | 291.3 | 4.59 | - |
| 313 | 13.12 | 34.36 | 211.7 | 4.55 | - |
| 423 | 8.86 | 34.09 | 159.0 | 3.76 | - |
| 527 | 6.76 | 34.07 | 131.2 | 2.21 | - |
| 637 | 5.62 | 34.20 | 107.8 | 0.84 | - |
| 852 | 4.79 | 34.42 | 81.7 | 0.51 | - |
| 1058 | 4.14 | 34.51 | 68.5 | 0.92 | - |
| 1266 | 3.56 | 34.58 | 57.8 | 1.19 | - |


VESSEL HUGH M SMITH CRUISE 40
STATION 160 ΔD' O/ 1000 = 1.734
LAT. 21° 45' N LONG. 156° 30' W
DATE (GMT) 9 / 5 / 57 TIME (GMT) 1828
DEPTH (METERS)
PO4-P
POFI USFWS MAY 1956 T. NAKATA

Weather: 03, cloud coverage 8. Wind: 090°, 18 kt. Sea: 3-5 ft. Wire angle: 20°.
BT slide: 450. Dry bulb: 76.6°F. Wet bulb: 72.2°F. Barometric pressure: 1016 mb.

| Depth, m. | T, °C. | S, °/oo | δ t, cl./ton | $O_2$, ml./L. | $PO_4$-P, µg at./L. |
|---|---|---|---|---|---|
| 0 | 24.80 | 34.94 | 451.4 | 4.67 | - |
| 25 | 24.84 | 34.96 | 451.1 | 4.68 | - |
| 50 | 24.84 | 34.97 | 450.4 | 4.65 | - |
| 75 | 22.82 | 35.14 | 381.2 | 5.03 | - |
| 151 | 20.00 | 35.10 | 310.5 | 4.52 | - |
| 307 | 11.52 | 34.16 | 197.2 | 4.27 | - |
| 413 | 8.34 | 34.09 | 151.4 | 3.75 | - |
| 514 | 6.65 | 34.13 | 125.3 | 1.55 | - |
| 619 | 5.57 | 34.25 | 103.4 | 0.68 | - |
| 725 | 4.96 | 34.33 | 90.3 | 0.51 | - |
| 928 | 4.29 | 34.51 | 69.9 | 0.88 | - |
| 1152 | 3.74 | 34.58 | 59.4 | 1.07 | - |
| 1367 | 3.25 | 34.58 | 54.9 | 1.30 | - |